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ANNUAL REPORT

OF THE

DEPARTMENT OF AGRICULTURE

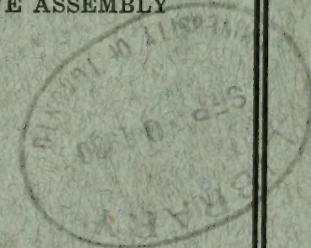
OF THE

PROVINCE OF ALBERTA

FOR THE YEAR

1929

PUBLISHED BY ORDER OF THE LEGISLATIVE ASSEMBLY



EDMONTON:
PRINTED BY W. D. MCLEAN, KING'S PRINTER
1920

Sessional Paper No. 2.

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the Chief Publicity
Commissioner
of Alberta
Dept. of Agriculture
Bronxton*

DEPARTMENT OF AGRICULTURE, EDMONTON.

To His Honour

WILLIAM EGBERT,

Lieutenant Governor of the Province of Alberta.

Sir,—

I have the honour to submit herewith the Report of the Department of Agriculture for the year 1929.

I have the honour to be, Sir,

Your obedient servant,

GEORGE HOADLEY,

Minister of Agriculture.

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DEPARTMENT OF AGRICULTURE

Hon. George Hoadley, Minister of Agriculture.

1929

Heads of Branches

H. A. Craig, Deputy Minister and Superintendent of Schools of Agriculture.

J. F. Andrew, Assistant Deputy Minister of Agriculture.

P. W. Johnson, Secretary to the Department.

S. G. Carlyle, Live Stock Commissioner, Brand Recorder and Superintendent of Fairs and Institutes.

C. P. Marker, Dairy Commissioner.

P. R. Talbot, V.S., Provincial Veterinarian.

W. J. Stephen, Field Crops Commissioner.

G. M. Cormie, Poultry Commissioner.

D. Douglas, Director of Demonstration Farms.

Benj. Lawton, Game and Fire Commissioner.

Miss Jessie McMillan, Director of Alberta Women's Bureau.

Report of the Deputy Minister

HONOURABLE GEORGE HOADLEY,
Minister of Agriculture,
Edmonton, Alberta.

SIR,—

I have the honour to submit herewith the report of the Department of Agriculture for the year 1929, which includes a review of the work carried on by the various branches.

From the standpoint of crop production the season just closed has been one of lower average yield per acre than for several years past. The value of the wheat crop, however, has been enhanced very greatly by the marked improvement of the quality. During the season of 1928 only one car grading No. 1 Hard was shipped to Fort William. Up to the end of December, 1929, 2,551 cars of No. 1 have been shipped. The great bulk of the crop harvested during the last season fell into the No. 1 and No. 2 grades; while in the previous year the bulk of the grain graded No. 3 and No. 4 Northern. This has meant that the value of the smaller wheat crop in 1929 is only about \$14,000,000 less than the very large crop of 1928. A considerable area of the central portion of the Province suffered from the effects of a dry season. The whole Southern area, as well as the Northern part of the Province, harvested a satisfactory and profitable crop. The acreage under cultivation is steadily increasing, having reached a total of 16,334,422 during 1929.

There has been an increased interest shown in the livestock industry during the past year. The greatest increase has been noticeable in connection with sheep-raising, dairy, and poultry-raising. Large numbers of small farm flocks have been established. The total dairy production is only slightly in excess of a year ago, notwithstanding the fact that more dairy cows were milked during the past season. On account of a shortage of pasture the average production of cows was not as great as it would otherwise have been during a normal season.

The value of poultry products has increased approximately one and a half million dollars.

The honey production of the Province has now passed the half million lb. mark, having increased approximately 200,000 lbs., over last year. One bee-keeper in the Province, located near Lethbridge, has produced 11 cars of honey this year. The Department has considered it wise to give closer attention to the bee-keeping industry, and accordingly has appointed a Provincial Apiarist in the person of Mr. S. Hillerud. Mr. Hillerud is a young man who has had an extensive experience in bee-keeping on his own account and has studied bee-keeping in Ontario and several States of the Union. Recently he has been lecturing on bee-keeping at the Schools of

Agriculture. Foul brood, which has been a prevalent disease in several Canadian Provinces, is being kept well under control in Alberta. Three inspectors have been at work during the past season, and have made a check-up on most of the apiaries in the Province. Some foul brood has been discovered and effective measures taken for its control.

STAFF CHANGES.

During the year transfer of the following services has been made to the Department of Municipal Affairs: Seed and Relief and Cow Bill Collections; also Debt Adjustment Act.

Mr. S. Hillerud, Lecturer, School of Agriculture, Claresholm, has been appointed Provincial Apiarist. Mr. J. H. Hare has been appointed Manager of the Provincial Poultry Plant at Oliver, and Mr. G. M. Cormie has been appointed Poultry Commissioner for the Province.

The poultry promotion work conducted by the Federal Department of Agriculture has been taken over by this Province, and in future this work will be handled entirely through the Provincial Poultry Commissioner's office.

Mr. J. F. Andrew, who was lecturer in Animal Husbandry and Farm Manager at the Vermilion School of Agriculture, has been appointed Assistant Deputy Minister of Agriculture.

Mr. W. J. Stephen resigned as Field Crops Commissioner, and Mr. E. L. Gray, District Agriculturist of Hanna, has been appointed in his place.

On October 1st Mr. D. A. McCannel, who had efficiently performed the duties of Provincial Publicity Commissioner for two and a half years, tendered his resignation.

I am pleased to report that the staff of the Department, during the year, has rendered very efficient service, and the relationships with other agricultural organizations, such as the University of Alberta and the Federal Department of Agriculture, have been particularly happy.

H. A. CRAIG,

Deputy Minister.

Report of the Dairy Commissioner

(C. P. MARKER)

GENERAL.

The main features of the dairy business in the year 1929 were an increased number of dairy cattle, a greater total milk production and average yield per cow, and slightly lower price level. The dairy factories reported a larger output of butter and cheese than that of the previous year. These features are referred to at more detail in the following paragraphs.

While it is satisfactory to report increases along the way, we must record, on the other hand, a slight decrease in the price of butterfat in churning cream, in creamery butter and in factory cheese. Lower prices have ruled during the year in the markets of other countries, and this condition was responsible for the somewhat lower figures realized from the sale of Alberta's products. It appears, however, that the prices in the fluid milk and cream markets, and for ice cream, were maintained at practically the same level as in 1928.

The following table gives a general view of the comparative production and value of dairy products for the past two years:

ALBERTA.

QUANTITIES AND VALUES OF DAIRY PRODUCTS, 1929 and 1928.

	1929			
Product.	Pounds.	Price, cents.	Value.	
Creamery Butter (95 creameries)	16,004,463	36.39	\$ 5,825,247	
Factory Cheese (10 factories)	1,001,475	19.78	198,047	
Other Dairy Products* (Estimated) .....	.....	.....	14,726,706	
Total Value.....			\$20,750,000	
	1928			
Product.	Pounds.	Price, cents.	Value.	
Creamery Butter (100 creameries)	14,375,636	37.38	\$ 5,374,456	
Factory Cheese (9 factories)	722,048	21.94	158,404	
Other Dairy Products* (Estimated) .....	.....	.....	14,817,140	
Total Value.....			\$20,350,000	

*Including milk and cream for direct consumption; Ice Cream; home-made butter and cheese; skimmed milk and buttermilk.

DAIRY CATTLE.

According to the report published by the Dominion Bureau of Statistics, there were about one thousand more milk cows in the Province at the beginning of June, 1929, than at the corresponding date in 1928—a numerical increase of one-third of one per cent., whereas the reported number of yearlings kept for milk (177,883) was 22 per cent. greater than the number (145,844) reported for 1928.

These figures would indicate that there will be a very considerable addition to the dairy herds, and a corresponding increase in the milk production of the Province in the near future.

The distribution of dairy cows throughout the Province by sections, was practically similar to that reported by this branch last year. By way of a few details reference may be made to the figures reported for milk cows and yearlings in some of the census divisions.

The southern section, the area extending from Bowden to the International boundary, showed practically the same number of cows as in 1928, but 11 per cent. more yearlings for milk.

The Lethbridge, Claresholm, Pincher Creek and Cardston area, census division II, showed an increase of 17 per cent. in the number of cows, and 12 per cent. in the number of yearlings. The High River, Nanton and Vulcan area, in census division IV, showed a decrease of 11 per cent. in cows, but 23 per cent. more yearlings. The area generally referred to as the Goose Lake line, and tributary to Hanna and Youngstown, showed 7 per cent. fewer cows, but 17 per cent. more yearlings.

The central section, Bowden to Millet inclusive, east and west, shows a decrease of 1½ per cent. in the number of cows, but an increase of nearly 16 per cent. of yearlings. Census division VII, the Wainwright, Hardisty, and Coronation area, reported 2 per cent. more cows and 17 per cent. more yearlings.

The Wetaskiwin, Camrose, Stettler and Innisfail area in census division VIII showed a decrease of 5 per cent. of cows, but 19 per cent. more yearlings. The figures given for division IX, the Red Deer-Rocky Mountain House area, show a 3 per cent. increase in the number of cows, and 6 per cent. more yearlings.

The northern section, north of Millet, reported 2 per cent. more cows and 49 per cent. more yearlings. Census division X, the Vegreville, Vermilion and Lloydminster area, showed 10 per cent. fewer cows, but 38 per cent. more yearlings than in 1928. The Edmonton and Leduc area, census division XI, had 5 per cent. more cows and 37 per cent. more yearlings. The Edson and Whitecourt area, in division XII, reported 23 per cent. more cows and 68 per cent. more yearlings. The Legal, Westlock and Athabasca area, division XIV, showed an increase of 3 per cent. in the number of cows and 65 per cent. more yearlings. The High Prairie area, in division XV, shows an 103 per cent. increase in cows and 126 per cent. more yearlings. The Grande Prairie, Spirit River and Berwyn area, in division XVI, reports 5 per cent. fewer cows, but 58 per cent. more yearlings. The Fort McMurray area is credited with a total of 44 milk cows and 33 yearlings.

CREAMERIES AND CHEESE FACTORIES.

Ninety-five creameries were operated during the year, and reported a butter output of 16,004,463 pounds—a yearly increase of 11 per cent. New plants were established at Vilna, Lethbridge (The City Dairy), and Barrhead; whereas the creameries that had formerly operated at Irma, Grande Prairie, Forestburg, Monitor, Sangudo, Clandonald and Calgary (Producers) did not re-open. The Wetaskiwin Dairy Pool acquired the Mutual Creamery, and is now operating it as a pool unit, and the Southern Alberta Dairy

Pool opened a milk-distributing plant at Calgary on the 15th day of September, 1929.

Ten cheese factories were operated, one more than in 1928—the Woodland Dairy, Ltd., Edmonton, having resumed the manufacture of cheese. The factories reported a cheese production of 1,001,475 pounds for the year—an increase of 38.7 per cent. over 1928.

I append a list giving particulars as to location and operation of the creameries and cheese factories.

CREAMERIES AND CHEESE FACTORIES IN ALBERTA.

Cheese Factories.

Located at	Proprietors and Head Office.
Bawlf.....	Burns & Co., Ltd., Edmonton.
Bruderheim.....	Burns & Co., Ltd., Edmonton.
Buford.....	Woodland Dairy, Ltd., Edmonton.
Mountain View.....	Cardston Creamery Association, Cardston.
Round Hill.....	Burns & Co., Ltd., Edmonton.

Combined Creameries and Cheese Factories.

Leduc.....	Burns & Co., Ltd., Edmonton.
Millet.....	Burns & Co., Ltd., Edmonton.
Wetaskiwin.....	Wetaskiwin Creamery Co., Ltd., Wetaskiwin.
New Norway.....	Burns & Co., Ltd., Edmonton.

Burns & Co., Ltd., Edmonton, operate branch creameries at the following points: Acme, Camrose, Daysland, Holden, Hay Lakes, Innisfree, Kinsella, Kitscoty, Manville, Metiskow, Nanton, Pincher Creek, Ponoka, Radway Centre, St. Paul, Stettler, Vegreville, Vermilion, Westlock, Wainwright.

Central Creameries, Ltd., Calgary, operates branch creameries at the following points: Bentley, Bowden, Carstairs, Eckville, Okotoks, Olds, Rimbev, Rocky Mountain House, Sundre, Sylvan Lake, Youngstown.

Woodland Dairy, Ltd., Edmonton, is head office for the following creameries: Glen Park Butter & Cheese Co., Ltd., Calmar; Chipman Creamery Co., Ltd., Chipman; Edgerton Creamery Co., Ltd., Edgerton; Elk Point Creamery, Ltd., Elk Point; Woodland Dairy of High Prairie, Ltd., High Prairie; New Sarepta Dairy, Ltd., New Sarepta; Ryley Creamery, Ltd., Ryley; Tofield Creamery, Ltd., Tofield.

Creameries in Alberta.

Located at	Proprietors and Head Office.
Alix.....	Central Alberta Dairy Pool, Alix.
Athabasca.....	Athabasca Creamery, Athabasca.
Barrhead.....	John Van Dam, Barrhead.
Bashaw.....	Bashaw Creamery & Milling Co., Ltd., Bashaw.
Bassano.....	W. A. Brodie, Bassano.
Bonnyville.....	Bonnyville Creamery, Ltd., Bonnyville.
Calgary.....	Swift Canadian Co., Ltd., Calgary.
".....	Central Creameries, Ltd., Calgary.
".....	Campbell & Griffin Co., Ltd., Calgary.
".....	Burns & Co., Ltd., Calgary.
".....	Southern Alberta Dairy Pool, Calgary.
Cardston.....	Cardston Creamery Ass'n, Cardston.
Castor.....	Castor Creamery, Ltd., Castor.
Claresholm.....	T. L. Bernard, Claresholm.
Clive.....	Clive Creamery, Clive.
Cochrane.....	Cochrane Creamery Ass'n, Cochrane.
Coronation.....	Coronation Creamery, Ltd., Coronation.
Delburne.....	Delburne Creamery, Ltd., Delburne.
Didsbury.....	Crystal Dairy, Ltd., Calgary.
Derwent.....	A. Millar, Derwent.

Donaldalda.....	Donaldalda Creamery, Donaldalda.
Edmonton.....	Northern Alberta Dairy Pool, Edmonton.
"	Burns & Co., Ltd., Edmonton.
"	Woodland Dairy, Ltd., Edmonton.
"	Swift Canadian Co., Ltd., Edmonton.
"	Scona Creamery Co., Edmonton.
"	Farmers' Dairy, Ltd., Edmonton.
"	Jasper Dairy, Ltd., Edmonton.
Edberg.....	Edberg Creamery, Ltd., Edberg.
Elnora.....	Elnora Creamery, Elnora.
Hanna.....	Hanna Creamery, Ltd., Hanna.
High River.....	High River Creamery, High River.
Innisfail.....	Innisfail Creamery, Ltd., Innisfail.
Innisfail.....	Richfields Creamery, Innisfail.
Lacombe.....	Lacombe Creamery Co., Lacombe.
Lac La Biche.....	Lac La Biche Creamery, Lac La Biche.
Lethbridge.....	Crystal Dairy, Ltd., Lethbridge.
Lethbridge.....	City Dairy, Lethbridge.
Markerville.....	D. Morkeberg, Markerville.
Macleod.....	Crystal Dairy, Ltd., Macleod.
Medicine Hat.....	Crystal Dairy, Ltd., Medicine Hat.
Onoway.....	Onoway Creamery Association, Onoway.
Ponoka.....	Fertile Valley Creamery, Ltd., Ponoka.
Red Deer.....	Red Deer Creamery, Red Deer.
Red Deer.....	United Dairies, Ltd., Red Deer.
Sedgewick.....	Sedgewick Co-op. Creamery Ass'n, Sedgewick.
Strathmore.....	C.P.R. Demonstration Farm, Strathmore.
Valhalla.....	Valhalla Co-op. Creamery Ass'n, Valhalla.
Viking.....	Viking Co-op. Creamery Ass'n, Viking.
Vilna.....	S. Dykstra, Vilna.
Wetaskiwin.....	Wetaskiwin Dairy Pool, Wetaskiwin.

GRADING AND GRADES OF CREAM.

The following table shows the quantity of butter fat in cream reported by the creameries of the Province, for the year, and the corresponding figures for 1928. The classification by percentages is also shown, based upon the official grade standards established under the provisions of The Dairymen's Act. The figures in the table indicate a further improvement in the general quality of the cream supplied to the creameries.

ALBERTA.

Grades. Butter Fat.	1928.		1929.	
	Pounds.	Per cent.	Pounds.	Per cent.
Table Cream	330,641	2.7	427,164	3.1
Ice Cream Special .....	.....	.....	27,991	.2
Special Grade	4,807,172	39.3	5,946,121	43.6
First Grade	6,197,896	50.6	6,474,988	47.5
Second Grade	885,875	7.2	743,616	5.4
Off Grade	21,576	.2	24,194	.2
	<hr/>	<hr/>	<hr/>	<hr/>
	12,243,160	100.0	13,644,074	100.0

The Provincial Cream Grading Service was continued during the year, though with a smaller number of men, stationed at creamery points which are generally recognized to be of a more or less competitive character. These creameries, twenty in number, received 42 per cent. of the butter fat shown in the foregoing table. The grading and testing of cream at the other 75 creameries, handling 58 per cent. of the butter fat, was done by men employed by the operators, and who had qualified for a grader's and tester's license under The Dairymen's Act. The whole cream grading work was supervised by the Provincial dairy inspectors and instructors,

as in former years. An extensive survey shows that the average butter fat contents per can of cream received at the creameries in 1929 was 14.8 pounds. Hence the year's cream purchases involved 921,900 individual transactions.

LICENSES AND PERMITS.

There were issued during the year sixteen milk and cream tester's licenses in form "A," and 177 grader's and tester's licenses in form "B"; also 105 dairy factory licenses in form "C," under the provisions of The Dairymen's Act and Regulations—the total license fees amounting to \$911.

Twenty-two permits were granted for the transfer of cream under specified conditions, from one creamery to another, for manufacture.

ANALYTICAL WORK.

The bacteriological and other analytical work carried on by the Department, and discussed at some length in the 1928 Report of this Branch, was continued during the year along much the same lines, and in the laboratory courteously placed at the Department's disposal by the Faculty of Medicine of the University of Alberta.

The bacteriologist, Mr. J. B. Linneboe, reports that 3,503 samples of creamery butter from 90 creameries were analyzed for yeasts and moulds during the year, as compared with 2,801 routine analyses in 1928, an increase of 25 per cent.

The reports covering the analysis of the samples are furnished from day to day to the operators of the creameries concerned, and it is gratifying to note by the annually decreasing average counts that the great majority of the creameries in the Province are being guided by the results of this work in their daily routine, affecting the quality of their product from a bacteriological standpoint. In this connection, I quote extracts from letters that have come to the Department from two of the largest firms of creamery operators in the Province (operating forty creameries) respecting the utility of this analytical service during the past year:

1. "We have found this service of great value in our creamery work, and I wish to say that Mr. Linneboe's willingness to be of service in any way possible, and at all times, is very much appreciated by us. The writer has received a lot of valuable information from time to time from him, which is passed on to our boys with good results."

2. "As we are now practically at the end of the current butter-making season, we thought it would be appropriate to inform you of our complete satisfaction with the service that your Department has extended in the matter of yeast and mould counts. We are convinced that this work has enabled us to keep a close check on our plants in respect to care exercised in sanitation and workmanship. The total effect of the service, we are sure, must eventually result in definite improvement in the general quality of butter made in the Province, and we are sure you will feel that it has, therefore, more than justified the expense entailed.

"We would like to say further that Mr. Linneboe has extended all possible co-operation in the carrying on of the service, and has been very helpful to us in many ways."

In addition to the routine mould and yeast counts, there were 519 miscellaneous analyses made of dairy products for the Calgary and Edmonton exhibitions, and for the annual Dairy Convention

contests. A number of analyses were made of creamery well water, and a simple method worked out for the partial sterilization of the latter under ordinary local dairy factory conditions. The general adoption of this method by creameries having more or less defective well water should prove very beneficial.

STATISTICAL DATA.

The following tables show, at a glance, some of the outstanding features of Alberta's dairy development for a term of years:

DAIRY STATISTICS, ALBERTA.

MILCH COWS.

Year.	Cows.	Year.	Cows.
1901	46,101	1920	305,607
1906	101,245	1921	423,838
1911	147,687	1922	392,037
1912	157,922	1923	410,242
1913	168,376	1924	433,528
1914	179,068	1925	460,722
1915	183,974	1926	436,500
1916	277,324	1927	380,000
1917	325,861	1928	344,495
1918	328,702	1929	345,566
1919	336,596		

TOTAL ANNUAL VALUE OF DAIRY PRODUCTS.

1900	\$ 546,476	1922	\$22,950,000
1910	7,855,761	1923	22,975,000
1915	15,895,586	1924	23,208,562
1916	18,466,311	1925	23,002,000
1917	24,794,597	1926	21,820,000
1918	27,500,000	1927	20,750,000
1919	31,625,000	1928	20,350,000
1920	34,000,000	1929	20,750,000
1921	25,500,000		

CREAMERY BUTTER PRODUCTION.

Year.	Creameries.	Lbs. of Butter	Selling Value. (cents per lb.)
1912	53	3,010,755	\$ 823,500 (27.352)
1913	49	4,115,537	1,090,475 (26.496)
1914	46	5,444,806	1,417,000 (26.025)
1915	57	7,544,148	2,021,448 (26.795)
1916	57	8,521,784	2,619,248 (30.736)
1917	66	8,944,171	3,414,541 (38.176)
1918	56	9,053,237	4,025,851 (44.469)
1919	53	11,822,890	6,132,739 (51.87)
1920	53	11,821,291	6,555,509 (55.45)
1921	44	13,048,493	4,543,007 (34.82)
1922	54	15,417,070	5,126,843 (33.25)
1923	75	17,868,853	5,891,186 (32.97)
1924	89	22,339,857	7,059,630 (31.6)
1925	99	19,630,101	6,959,059 (35.45)
1926	99	19,912,466	6,568,280 (32.96)
1927	100	16,179,712	5,765,347 (35.63)
1928	100	14,375,636	5,374,456 (37.38)
1929	95	16,004,463	5,825,247 (36.39)

FACTORY CHEESE PRODUCTION.

Year.	Factories.	Lbs. of Cheese.	Selling Value. (cents per lb.)
1912	6	40,000	\$ 5,600 (14.00)
1913	7	70,716	5,900 (14.00)
1914	5	70,581	10,590 (15.00)
1915	13	381,832	68,441 (17.93)
1916	15	745,122	154,453 (20.73)
1917	20	1,274,905	280,185 (21.97)
1918	11	552,834	130,911 (23.68)
1919	10	520,530	145,161 (27.9)
1920	7	398,750	110,355 (27.7)
1921	10	930,660	200,478 (21.54)
1922	14	931,992	183,860 (19.73)
1923	13	1,865,608	368,771 (19.77)
1924	12	1,714,790	278,478 (16.24)
1925	14	1,473,835	306,604 (20.8)
1926	15	1,449,983	275,107 (19.0)
1927	12	848,511	170,690 (20.12)
1928	9	722,048	158,404 (21.94)
1929	10	1,001,475	198,047 (19.78)

Report of the Live Stock Commissioner (S. G. CARLYLE)

The past year has been profitable for the live stock men of the Province. In looking over the reports of the Calgary and Edmonton Stock Yards, we find that there has been a decrease of around 8,400 head of cattle coming on the Edmonton Stock Yards and around 10,321 head less on the Calgary Yards. To offset this there is an increase of nearly 23,766 hogs and 5,238 sheep on the Edmonton Yards and on the Calgary Yards an increase of 7,605 hogs and 8,234 sheep. So that there has been a total increase in the value of all live stock handled at the Edmonton Yards of \$438,295.00 and a total decrease of \$298,208.25 at the Calgary Yards, over the preceding year.

Stock came through the winter and went on the grass in good condition, and prices have maintained a high level throughout the year with the exception of lambs, in the latter part of the season. There is apparently a definite swing in certain districts of the Province back to live stock. The frosted crop of 1928 is largely responsible. Owing to the drought over the central eastern part of the Province, surplus stock in these districts was rushed to market in the early part of the fall, but in the ranching districts, where most of our cattle are raised, there has been an abundance of grass and feed. Cattle from these districts went on to the market in good condition. There has been an increased interest in dairying, and a large trade has been carried on in dairy cattle during the whole season.

HORSES.

There was a splendid demand for horses during the spring and summer months, and approximately 21,700 head were shipped out of the Province during 1929, most of these going to the Eastern Provinces. In the fall there was a decided dropping off, and there was practically no demand during these months. This was largely due to the light crops which existed, not only in the west, but affected portions of the Eastern Provinces. The sale of tractors was heavy, and it has been the policy of some tractor firms to trade tractors for farm horses and ship these horses to the east, where quite a trade has been built up. While there seems to be a large number of medium weight horses still on hand, at the present rate of shipments the time must soon come when there will be a demand for good farm horses, because the tractor cannot entirely replace the horse on our Alberta farms. There is a scarcity in the Province of good big drafters, and these are easily sold at good prices.

The light horse market for polo ponies and strong saddle horses has been exceptionally good, and the demand has increased for this type of horse, especially on the eastern markets. Those engaged in raising this class are finding it more and more profitable.

CATTLE.

The cattle business is in a very healthy condition. Prices have been good for all classes of cattle throughout the year, with the exception of steers during the early months of 1929, but later on, during the months of May and June, prices advanced, and those who held their steers until this time received a good profit. The tendency at present in the ranching districts is to sell the animals when they are young, and some of the larger ranchers sold their entire calf crop.

There has been a decided swing to the production of baby beef, both in Canada and the United States.

In the irrigated districts some of the ranchers have placed bunches of cattle with some of the farmers, especially in the Raymond district, where they will be fed alfalfa and sugar beet pulp. These cattle were put out on the share basis, and it is hoped that the experiment will be profitable to both parties.

On account of the light crop, very few cattle went out on feed in the Edmonton and Calgary districts, so that most of the feeders were shipped out of the Province.

The bull sales held at Calgary, Edmonton, and Lacombe were well attended, and the prices realized were quite satisfactory. The following is a report of these sales:

1929 SPRING BULL SALE AT EDMONTON.

Breed.	No. Entered.	No. Sold	Amount.	Average.
Aberdeen Angus	1	1	\$ 150.00	\$150.00
Hereford	1	1	155.00	155.00
Shorthorn	40	34	5,565.00	163.67
Dairy Shorthorn	4	4	260.00	65.00
Ayrshire	2	1	90.00	90.00
Holstein-Friesian	2	2	210.00	105.00
Totals	50	43	\$6,430.00	\$149.53

1929 SPRING BULL SALE AT CALGARY.

Breed.	No. Sold.	Amount.	Average.
Shorthorns	272	\$ 42,055.00	\$154.61
Aberdeen Angus	56	11,360.00	202.86
Herefords	168	55,815.00	332.23
Red Polled	3	370.00	123.33
Holsteins	2	190.00	95.00
Totals.....	501	\$109,790.00	\$219.14

1929 LACOMBE BULL SALE.

Breed.	No. Sold.	Amount.	Average.
Herefords	3	.....	\$288.30
Shorthorns	32	.....	163.15
Aberdeen Angus	6	.....	159.15
Totals.....	41	.....	\$171.70

FALL STOCK SALES, CALGARY, NOV. 4th to 6th.

SWINE.

Breed.	No. Sold.	Amount.	Average.
Tamworth females	2	\$ 44.00	\$22.00
Tamworth boars	7	138.00	19.71
Berkshire females	6	118.50	19.75
Berkshire boars	8	225.00	28.13
Yorkshire females	5	75.00	15.00
Yorkshire boars	8	393.00	49.13
Totals.....	36	\$993.50	\$27.60

CATTLE.

Breed.	No. Sold.	Amount.	Average.
Shorthorn females	9	\$ 855.00	\$ 95.00
Shorthorn bulls	2	325.00	167.50
Hereford females	4	240.00	60.00
Holstein bulls	1	100.00	100.00
Totals.....	16	\$1,520.00	\$ 95.00
Grade Cows	4	\$ 372.50	\$ 93.13

SHEEP.

Breed.	No. Sold.	Amount.	Average.
Rambouillet ewes	7	\$ 70.00	\$10.00
Rambouillet rams	2	135.00	67.50
Shropshire ewes	48	727.50	15.16
Shropshire rams	82	2,421.50	29.53
Suffolk ewes	38	1,235.00	32.50
Suffolk rams	77	3,063.00	39.78
Hampshire ewes	6	160.00	26.66
Hampshire rams	43	2,387.50	55.52
Oxford ewes	63	1,065.00	16.90
Oxford rams	98	2,830.00	28.87
Totals.....	464	\$14,094.50	\$30.38
Grade ewes	381	\$ 4,744.50	\$12.45

DAIRY CATTLE.

The demand for dairy cattle has been exceptionally good all through the season, and prices maintained a high level. Some of the dairy companies are active in securing good animals for their patrons and this increased the demand.

There were several carloads of pure-bred Ayrshires and Jerseys shipped into the Province. The Jerseys went to the Calgary, Wetaskiwin, and Camrose districts, and the Ayrshires into the Vegreville and Willingdon districts. In addition to the demand for the strictly dairy breeds, there has also been a good demand for dual purpose breeds, that is, the milking Shorthorn and Red Polls, and there are some splendid herds of these two breeds in the Province.

There has been a very strong demand for the forming of boys and girls' dairy calf clubs, and it is expected that several more of these will be formed in 1930.

There has been a good demand for dairy bulls, and the prices received for the good animals have been very satisfactory. The dairy cattle from this Province made a wonderful record at the Royal Show at Toronto.

SHEEP.

Up to the present year sheep have enjoyed a very enviable place in the farm economy. Prices for wool, breeding sheep, lambs and mutton were exceptionally good, but this year, owing to certain market conditions, prices in both wool and mutton took a downward turn, though the demand for breeding sheep still kept up. Owing to the duty being taken off yarn from Great Britain to Canada, manufacturers purchased yarn instead of Canadian wool. There is also a falling off in the demand from the export market, and these conditions are responsible for about 40% decrease in the price of wool this year.

There has also been a large increase in the importation of Australian lamb, it being estimated that over a fifth of the lamb consumed is imported, and these importations are much heavier this year than ever before.

Hogs.

The hog market was fairly even throughout the year, and there was an increase of \$1.25 per hundredweight over 1928, also considerable increase in production, the low grade of grain of 1928 being no doubt responsible for this. While there is no noticeable increase in the select bacon hogs, there is a marked improvement in the quality throughout the lower grades. Owing to the drought a large number of light and feeder hogs were shipped in during the months of August and September, and shortage of feed will no doubt affect the production of 1930, as fewer sows will be bred.

New grading regulations were put into effect with the new gradings. The grades as at present instituted are: select bacons, bacons, butchers, heavies, extra heavies, lights, and feeders, roughs, No. 1 sows, No. 2 sows, and stags. The basic price now is the bacon hog with a premium of 5% for selects. The new regulations were not received any too kindly by the producers, as they expected the basic price would have been set on the butcher grade instead of the bacon grade. However, the steady price which pervaded the whole year was very encouraging to the producers, and if these market conditions can be kept up from year to year there will soon be an increased production of hogs in this Province.

We had a good many requests for short courses during the year, and with the exception of one or two, all were well attended and a great deal of interest shown. The subjects discussed were: Soil, Cultivation, Forage and Cereal Crops, Registered Seed Grain, Boys and Girls' Club Work, Live Stock, dealing principally with beef cattle, dairy cattle, sheep and swine. These courses were held at the following places: Hardisty, Sedgewick, Mundare, Manola, Innisfail, Bindloss, and Lethbridge. The course at Lethbridge was held in conjunction with the Dominion Experimental Farm. Evening meetings were also held at several points throughout the Province.

Farmers are more anxious to receive information and to hold meetings to discuss their problems than they have been for some years. They are beginning to realize in most sections that they cannot depend entirely on wheat and that some live stock is necessary to carry on their business successfully.

We have a lot of good stock in this Province, as was evidenced by our recent winnings at the Royal Winter Show at Toronto, where six carloads of cattle and one carload of sheep were shipped. On this stock eighty-four prizes were won, consisting of the following: twenty-three firsts, twenty-one seconds, eleven thirds, six Championships, four Reserve Championships, three Grand Championships, one Reserve Grand Championship, and several other lower prizes.

Report of Boys and Girls' Livestock Clubs

(G. S. BLACK, *Supervisor.*)

During the spring of 1929 twenty-one Swine Clubs, which had previously operated, again started their activities. Five new clubs were organized at the following points: Camrose, Salisbury, Spedden, Elk Point, and St. Paul, and five clubs situated at Treaty Hill, Alliance, Czar, Claresholm and Chipman were compelled to discontinue on account of drought.

The total membership was five hundred and seventy-four boys and girls, and despite very dry conditions, coupled with lack of feed, they did very creditable work. During the month of October twenty-one Swine Club Fairs were held. This year the hogs were graded and weighed at country points by the Dominion Live Stock Grader. This new venture proved very instructive to all concerned.

The hogs produced by these members were of good quality, the percentage of selects being 32%. The average of hogs graded in the Province for 1929 was less than 6%.

Twenty-one teams of three members each competed in the annual club competition at Edmonton. The Canadian Pacific trophy and trip to the Royal Show was won by Wm. Douglass and Art Kreise, of Lacombe. The Canadian National Railway competition, which also included a free trip to the Toronto Royal Show, was won by Alvin Ness and Ted Roose, of Camrose. The latter team won second prize in the Canadian National competition at Toronto in competition with all other provinces.

Excellent co-operation with the Dominion Livestock Branch exists, and the loaning of high-class boars to Boys and Girls' Swine Clubs by this branch is proving of great value to these districts. Additional incentive to this class of work is given by the handsome prizes and generous treatment to the members by T. Eaton, Hudson Bay and Swift Canadian companies, of Edmonton.

Sheep club work is expanding, and a large membership has been organized. Most of the clubs are in the Hanna and Sedgewick districts. The selection of good ewes and rams for these clubs is resulting in an improvement in the quality of lambs in these locations.

The interest in livestock projects for junior farmers is well illustrated by the demand for Dairy and Beef Cattle Clubs for 1930. One new club was formed in 1929, and already four new districts wish to start this spring.

In order to be successful, supervision in feeding, management, and marketing is necessary, and the training of boys and girls in judging by the supervisors adds greatly to the success of the club. The Boys and Girls' clubs in many districts are given splendid assistance by progressive farmers, service clubs, and agricultural societies. The great majority of these clubs are supervised by the district agriculturists.

Report of the Supervisor of School Fairs

(G. S. BLACK, *Supervisor.*)

During 1929 one hundred and twenty-three school fairs were held in the Province. Seven fairs were cancelled, due to the drought which affected certain areas of the Province.

The Province is divided into the following districts: Claresholm, Raymond, Olds, Sedgewick, and Vermilion.

The Department of Agriculture has the general supervision of the work in the Province, but the details are carried out by the staffs of the Claresholm, Olds, Raymond, and Vermilion Schools of Agriculture, and by the district agriculturist at Sedgewick. The representatives of the Department of Agriculture work at all times in close harmony with the school inspectors of the Provincial Department of Education.

The Department of Agriculture supplies free of charge, garden and flower seeds, printed instructions, entry tags, prize cards, insect pins, etc. It pays two-thirds of the prize money for live stock. Last year it supplied the following seeds: Beets, 1,265 lbs.; Peas, 4,430 lbs.; Swede Turnips, 565 lbs.; Carrots, 760 lbs.; Sweet Peas, 805 lbs.; Cabbage, 22,300 pkts.; Asters, 32,500 pkts.; Stocks, 33,800 pkts. The Department of Agriculture and Department of Education supply all judges.

The boy and girl winning the largest number of points at each school fair is entitled to one week's short course at one of the schools of agriculture. These courses are held in July of each year at Claresholm, Raymond, Vermilion and Olds.

During the school short course a special examination is held, and the boy and girl securing the highest number of points are entitled to a full term course of studies at one of the schools of agriculture. This includes railway transportation, free tuition, board and room and the payment of ten dollars for necessary books.

The Department of Agriculture also issues a diploma to the school obtaining the highest number of points per pupil enrolled by March 15th, in any school fair for the entries in agriculture and home economic classes. The Department of Education is issuing a diploma to the school obtaining the highest number of points per pupil at each school fair on their entries in school work.

In the Vermilion district there were thirty-six school fairs held, 369 schools took part, which included 8,356 pupils, and 38,234 entries.

In the Sedgewick district there were eight fairs, 86 schools took part, which included 2,107 pupils, and 7,137 entries.

In the Raymond district there were fifteen fairs, 137 schools took part, which included 3,613 pupils, and 9,003 entries.

In the Claresholm district there were twenty-five fairs, 196 schools took part, which included 4,865 pupils, and 14,461 entries.

In the Olds district there were thirty-nine fairs, 347 schools took part, which included 9,616 pupils, and 30,865 entries.

The aggregate for the province shows that there were 122 school fairs, 1,225 schools taking part, 28,557 pupils, and a total number of exhibits amounting to 99,700, an increase of 14,000 exhibits over the previous year.

Report of Superintendent of Fairs

(S. G. CARLYLE.)

The Agricultural Fairs held in the Province during 1929 were above the average over previous years, both as to point of attendance and quality of exhibits. Our reports from secretaries of fairs show that 50% of the fairs were better than last year, 25% as good as last year, and the other 25% poorer than in 1928.

In 1929 sixty-nine fair dates were allotted and only fifty-eight fairs were actually held. The fairs not held were located mostly in the drought areas, though there seems to be a steady decline in the number of fairs held each year during the past seven years. On the other hand there is a steady increase in the competitions of other organizations which are organized under The Agricultural Societies Act. In 1929 there were 22 field crops competitions, 16 seed fairs, 6 plowing matches, 10 poultry shows, 7 horticultural shows, and 1 good farms competition. There has been an increase in all these organizations over 1928, with the exception of the horticultural shows and good farms competitions, these both showing a decrease. The agricultural societies, however, are not responsible for all these competitions; the boards of trade in the various towns and cities are responsible for holding 15 field crops competitions and 6 seed fairs. Some of these seed fairs are not held even at places where there is an agricultural society, so that there is still plenty of work for agricultural societies to do. The fairs that are most successful are the fairs that are holding one or more of these other competitions.

Boys and Girls' Club work is developing very fast in this Province, and we had an increase of swine clubs over last year of 30%, and this could be increased by 100%, the limiting factor being the number of supervisors we have to carry on this work. In order to have a successful club we find that it is necessary to give supervision, and the more supervision given, generally speaking, the more successful is the club. The supervisors at present are the district agriculturists and the teachers of animal husbandry at the various schools of agriculture. Some of these men have several clubs organized under them, others only one, depending a great deal on the district in which they are located and also the amount of other work they are carrying.

We were glad to see an increase in the number of boys and girls' judging competitions at the fairs, and there is just one criticism that I would make, and that is that at some of the fairs the boys and girls have had little or no coaching or training, and for this reason a great deal of the value of the work is lost. At fairs in districts that hold these competitions, I would suggest that the officers of the fair, if at all possible, get someone to coach the

competitors for a few weeks before holding the fair. If this is done the boys and girls will get more value out of it.

In making a comparison of the agricultural societies between 1922 and 1928, we find rather an alarming situation. In 1922 the number of dates allotted for holding fairs was 113, the number of fairs cancelled 10, the number of fairs actually held 103, the total grant paid \$146,329.23. In 1928 the number of dates allotted was 68, the number of fairs cancelled 5, the number of fairs held 63, the total grant paid \$55,769.80. The difference is 40 fairs held and a difference in the grant of \$90,579.43 less than in 1922. The tendency at present seems for a few more fairs to be cut off each year, and if this continues what is going to be the future of the agricultural fairs in this Province? The school fairs have, on the other hand increased, until now we have 126 held in 1929 in comparison with 96 six years ago. Is the school fair going to supplant the agricultural fair? Can it take the place of the agricultural fair? I think you will perhaps all agree that it cannot, and that there is room for both to function. The object of the agricultural society is to improve the live stock of the Province by bringing in and by raising good pure-bred stock to supply the demand of the commercial grower. The market demands and the type of our live stock are constantly changing, and great improvement has been made during the past decade. The type of these animals is set at our large fairs and followed down through various smaller fairs in the country districts. At school fairs calves, colts, lambs and pigs are exhibited by children, and the most we can hope to do is to teach the boys and girls how to care for and feed their animals and to interest them in the keeping of good stock, so that when they become men and women, some of them at least will develop as leaders in the breeding and improvement of the live stock of this country.

With the advent of the automobile and the auto truck, I think it would be wiser to select centres where larger and better fairs can be held and where more prize money can be offered than at the smaller fairs; and, where these fairs can be arranged, in circuits, so as to make it worth while for a man to fit his stock. At the larger fairs some local attractions can be put on which would interest the surrounding villages and towns, and thus swell the gate receipts, because money is a factor in the successful carrying on of any association, and in looking over our reports we find that practically all of the larger fairs are in a good sound financial position, while many of the smaller fairs are not.

Report of the Brand Recorder

(S. G. CARLYLE, *Recorder*)

During the year 1929, 349 horse brands and 590 cattle brands were recorded to their respective owners, while 129 transfers and 4 changes were registered. Certified extracts of brands numbered 9, searches 5, strays 2,868 and renewals 3,280 (cattle 1,902 and horses 1,378). The total number of transactions being 7,234.

Compared with 1928, these transactions show a decrease of 177 horse brands, 72 cattle brands, 57 transfers, 791 strays and 1,136 renewals, with an increase of 1 change and 2 searches.

The number of brands issued to date are as follows: 38,393 horse brands and 57,554 cattle brands (inclusive of two-character brands). Two-character cattle brands number 6,756, making a total of 95,947.

The following table shows the different transactions which have taken place since separate records for the Province have been kept:

Year.	Horse.	Cattle.	Trans.	Changes.	Extracts, Searches	Re- newals.
1906	1,361	1,894	384	38	73	.....
1907	1,030	1,230	430	28	73	.....
1908	1,103	1,225	421	29	292	.....
1909	1,308	1,326	430	33	783	.....
1910	1,891	1,672	534	34	1,218	.....
1911	1,538	1,280	362	32	1,408	.....
1912	1,545	1,542	374	16	1,655	.....
1913	1,471	2,059	419	11	1,795	.....
1914	1,964	2,629	395	18	1,932	.....
1915	1,350	1,899	743	27	1,372	9,080
1916	1,503	2,833	463	28	801	3,679
1917	1,939	3,370	551	33	773	5,437
1918	2,161	3,455	617	40	985	5,084
1919	2,079	3,165	572	46	2,125	8,276
1920	1,363	2,133	514	30	1,944	4,649
1921	896	1,304	308	22	2,401	5,179
1922	708	1,092	225	23	2,548	4,449
1923	633	806	221	33	4,035	4,450
1924	737	1,045	365	5	3,826	5,878
1925	585	905	153	3	5,547	3,924
1926	623	837	185	4	5,219	4,060
1927	492	602	160	5	5,114	4,524
1928	526	662	186	3	3,671	4,416
1929	349	590	129	4	2,882	3,280
Average for 24 years	1,211	1,644	381	22	2,186	5,091

Report of the Field Crops Commissioner

(W. J. STEPHEN)

The work of this Branch for the year 1929 consisted in promoting and supervising field crops competitions, combined seed crops and cleaned seed competitions, good farms competitions, local seed fairs, Provincial seed fair, the operation of the Government cleaning and grading plant for the handling of registered seed, the marketing of registered seed, weed control and eradication, school fairs (part time), experimenting with portable grain cleaners and directing experimental work with superphosphate fertilizers.

FIELD CROPS COMPETITIONS.

Field Crops Competitions and Combined Seed Crops Competitions were held by the Taber Irrigation District; Bindloss Seed Growers' Association; Stettler Board of Trade; Stavely Board of Trade; Morrin Seed Growers' Association; Lethbridge Agricultural Society; Whitla Seed Club; Gleichen Board of Trade; Red Deer Agricultural Society; Calgary Board of Trade; Wastina Seed Club; Youngstown Seed Club; Byemoor Agricultural Society; Craigmyle Seed Club; Corinne Seed Club; Sullivan Lake Seed Club; Hanna Kiwanis Club; Sedgewick Agricultural Society; Lloydminster Agricultural Society; Wetaskiwin Board of Trade; Grande Prairie District; and the Athabasca Board of Trade.

The following were the judges of these competitions: Messrs Geo. A. Ingram, W. J. Jacobs, Ken Walker, W. Robinson, James Murray, Don Cameron, Frank Stevens, L. E. Kindt, T. H. Taylor, R. E. English, J. M. Murray, and J. D. Foster.

The Calgary Board of Trade offered a trophy for the best field of wheat entered in any field crops competition south of Red Deer. This was won by Mr. P. J. Rock, of Morrin. The Edmonton Board of Trade also offered a trophy for the best field of wheat in Northern Alberta. This was won by Mr. Gus Elgert, of Wetaskiwin. The Department of Agriculture offered a grand challenge cup for the best field of wheat entered in any Field Crops Competition held in Alberta. This was won by Mr. Gus Elgert, of Wetaskiwin.

Much interest was manifested in these competitions by seed growers throughout the Province.

LOCAL SEED FAIRS.

The following Local Seed Fairs were held: Experimental Union, Olds—judges, W. J. Stephen and O. S. Longman; Bowden, judge, F. S. Grisdale; Morrin, judge, G. M. Stewart; Busby, judge, Ken Walker; Sedgewick, judge, local judge; Camrose, judge, W. J. Stephen; Lloydminster, judge, F. H. Newcombe; Lake Saskatoon,

judge, A. R. Judson; Lousana-Hays, judge, J. D. Foster; Morrin, judge, E. H. Buckingham; Bindloss, judge, James Murray; Medicine Hat, judge, M. L. Freng; Chauvin, judge, E. H. Buckingham; Youngstown, judge, James Murray; Provost, judge, E. H. Buckingham; Athabasca, judge, Frank Stevens; Hanna, judge, W. S. Jacobs; and Leduc, judge, Frank Stevens.

PROVINCIAL SEED FAIR.

The Provincial Seed Fair was held in Edmonton in January. There was the usual excellent display of seed grain, grasses, clover seeds, potatoes, corn and boys and girls' exhibits. The fair was added to in attractiveness by a number of very splendid special displays. Many sales were effected by exhibitors on this occasion. A very large number of people availed themselves of the opportunity of visiting the fair. There were approximately 450 entries.

At the time of the fair the annual meeting of the Alberta Seed Growers' Association was held in conjunction with meetings put on by the Department and Provincial Seed Board. Valuable papers were given dealing with various phases of agriculture. These were greatly appreciated, as was evident by the large number of farmers present.

PREMIUM WINNERS AT THE CHICAGO INTERNATIONAL GRAIN AND HAY SHOW AND THE ROYAL WINTER FAIR, TORONTO.

The Field Crops Branch assembled all exhibits for the above grain shows, and shipped the same at Government expense to Toronto and Chicago. The Department also arranged to put these exhibits in place. The very creditable showing of the Province is evidenced by the following list of premiums won:

ROYAL WINTER FAIR, TORONTO.

WHEAT.

First.....	S. W. D. Frith, 10711 81st Ave., Edmonton, Alberta.
Second	W. D. Albright, Beaverlodge.

OATS.

First and Championship.....	Nels Linden, Wetaskiwin.
Fourth.....	Robert Cochrane, Grande Prairie.
Fifteenth	A. Lougheed, Bowden.

TWO-ROWED BARLEY.

Second.....	A. Lougheed, Bowden.
Fourth.....	Nick Taitinger, Clareholm.

FIELD PEAS.

Fifth.....	Robert Cochrane, Grande Prairie.
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UNCERTIFIED POTATOES, WHITE.

Sixth.....	John Ferguson, Conjuring Creek.
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INTERNATIONAL GRAIN AND HAY SHOW, CHICAGO.

WHEAT.

First and Grand Championship.....	Jos. H. B. Smith, Wolf Creek.
Seventh.....	Ed. J. Shank, Athabasca.
Ninth.....	A. C. B. Grenville, Morrin.

Twelfth.....	P. J. Rock, Morrin.
Fourteenth.....	G. W. Randall, High Prairie.
Fifteenth.....	S. W. D. Frith, Edmonton.
Sixteenth.....	W. D. Albright, Beaverlodge.
Twenty-first.....	H. G. L. Strange, Fenn.

OATS.

Second.....	Mrs. Nels Linden, Wetaskiwin.
Fourth.....	Jos. H. B. Smith, Wolf Creek.
Fifth.....	Nels Linden, Wetaskiwin.
Seventh.....	L. C. Anderson, Bittern Lake.
Thirteenth.....	D. I. Cheley, Lloydminster.
Fourteenth.....	Robert Cochrane, Grande Prairie.
Sixteenth.....	Wm. James Shearer, Morrin.

ALFALFA.

Second.....	T. Jones, Brooks.
Fifth.....	Don Losey, Brooks.
Seventh.....	P. J. Stuhlsatz, Rainier.
Eighth.....	O. P. Anderberg, River Bow.
Tenth.....	A. White, Brooks.
Eleventh.....	A. Garrow, Brooks.

ALSIKE.

Second.....	C. Foot, Duchess.
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TIMOTHY.

Fifth.....	A. Lougheed, Bowden.
Ninth.....	Ed. J. Shank, Athabasca.
Twelfth.....	Robert Cochrane, Grande Prairie.

SIX-ROWED BARLEY.

Ninth.....	H. G. L. Strange, Fenn.
Eleventh.....	A. Lougheed, Bowden.

SMALL WHITE PEAS.

First.....	P. U. Clubine, Wembley.
Fourth.....	A. T. Kemp, Olds.

EARLY OATS.

First.....	Ed. J. Shank, Athabasca.
Second.....	Jos. H. B. Smith, Wolf Creek.
Twelfth.....	A. Lougheed, Bowden.

C. N. SPECIAL.

Lougheed and Jones.

COLORED PEAS.

Third.....	P. G. Bolt, Olds.
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CORN SHOW.

Owing to unfavorable climatic conditions, the annual provincial corn show was not held. However, a large number of corn entries of very excellent quality were on exhibit at the Provincial Seed Fair.

NOXIOUS WEED WORK.

During the year 1929 twenty field supervisors were appointed, and assigned definite areas of the Province to work in. The duty of each supervisor was to educate the people of the district to know noxious weeds, to realize the seriousness of the weed situation, and to bring into effect recognized methods of control and eradication.

The co-operation of every individual was solicited, the idea being, not so much to compel farmers and others to keep their weeds under control, but to encourage community action and a desire to maintain clean farms. This policy proved popular and effective.

Our field supervisors, however, found it necessary in a number of cases to enforce the provisions of The Noxious Weeds Act.

The majority of the municipalities, towns, cities, railway companies and irrigation companies, showed their willingness to co-operate in weed control and are to be commended on the good work they are doing.

Twenty inspectors were appointed by the Minister of Agriculture to do weed work in Improvement Districts. These men covered fifty districts, and were guided in their activities by the various field supervisors in whose territories they worked.

A large number of meetings were held throughout the year by the different members of the Field Crops Branch staff, the majority of which were well attended, and much interest and enthusiasm were manifested.

The Advisory Weed Board which was named by the Minister during the year 1928 gave the Department very valuable assistance in deciding upon the nature of the weed campaign for the year.

The members of the Advisory Weed Board are:

- H. A. Craig, Chairman.
- H. W. Bright, Organization of Rural Municipalities.
- H. E. G. H. Scholefield, U.F.A.
- Don H. Bark, Seed Growers.
- Clyde C. Gillies, Unorganized Farmers.
- Frank Reed, Dominion Government.
- Geo. Bennett, Wheat Pool.
- W. J. Stephen, Secretary, Provincial Government.

Weed conferences were held in June and July at Raymond, Claresholm, Olds and Vermilion. Special weed meetings were also held at Drumheller, Hardisty, Sedgewick, Fairview, Grande Prairie, and other points throughout the Province.

The object of these meetings was to endeavor to bring before the public the seriousness of the weed situation and to solicit their co-operation in the campaign. Another purpose of the meetings was to educate municipal weed inspectors, councillors and others in the proper methods of weed control and eradication, organization, etc. The most of these conferences and meetings were well attended.

Weed Bulletin No. 3 was issued during the year and distributed on request. Weed posters were also prepared and were distributed free of charge to schools, farmers, municipal councils and others.

GOVERNMENT CLEANING AND GRADING PLANT.

The Provincial Government Cleaning and Grading Plant concluded its seventh year of operation on May 31st, 1929.

The following quantities of grain passed through the plant, and were sold by the department, in co-operation with the executive of the Alberta Seed Growers' Association :

Marquis Wheat	17,949 bushels
Banner Oats	6,535 bushels
Victory Oats	14,011 bushels
Oat Screenings	8,365 bushels
Total, Oats only.....	28,911 bushels
Total, Wheat and Oats.....	46,860 bushels

THE ALBERTA SEED GROWERS' ASSOCIATION.

The executive of the Alberta Seed Growers' Association appointed at the time of the annual convention of the association acts in an advisory capacity to the Department of Agriculture in the management of the Government Cleaning and Grading Plant. Meetings of the executive are held from time to time throughout the year. The 1929 executive consisted of: President, D. H. Bark; Vice-President, A. C. B. Grenville; Secretary-Treasurer and Managing Director, W. J. Stephen; Directors, Major H. G. L. Strange, D. H. Galbraith, and C. C. Gillies.

PROVINCIAL SEED BOARD.

The Provincial Seed Board consists of G. M. Stewart, Chairman; W. J. Stephen, Secretary; Dr. Robt. Newton, H. G. L. Strange, and W. H. Fairfield, Directors. The members of the board are appointed by the Provincial Minister of Agriculture.

The board dealt with matters pertaining to registered seed. It made presentations of many matters of importance to the registered seed industry of Alberta at the annual meeting of the Canadian Seed Growers' Association held in Winnipeg in June, 1929.

The board offered suggestions regarding the prize list of the 1930 Provincial Seed Fair, rules and regulations governing field crops competitions and other matters of interest to the Alberta seed growers.

It can be very properly said that the Alberta Provincial Seed Board safeguards at all times, in a very efficient manner, the seed industry of the Province.

COMMITTEE ON VARIETAL ZONATION.

The committee on varietal zonation decided it was unnecessary to convene a meeting at the time of the 1929 Provincial Seed Fair. However, the work of the various members of the committee continued throughout the year. It was decided to submit, at a meeting in January, 1930, a detailed report of the activities to date.

EXPERIMENTS WITH SUPERPHOSPHATES.

The Field Crops Branch superintended experimental work with superphosphates at different points throughout the Province. This fertilizer was obtained free of charge from the Trail Smelter, British Columbia, through the courtesy of the Canadian Pacific Railway.

The fertilizer was tried out on experimental plots at the Raymond, Claresholm, and Olds Schools of Agriculture and the Experimental Station at Lethbridge. Farmers also made tests on plots

from five to ten acres at Raymond, on the Lethbridge Northern, Claresholm, Olds, Gleichen, Sedgewick, and Edmonton. These latter tests were conducted under the direction of local Government representatives. The rate of application was one hundred pounds per acre on wheat and oat crops. It was applied to summerfallow land and to spring plowing. The results were quite varied. In most instances, however, maturity seemed to have been hastened by the application of fertilizer, and in many instances the yield was somewhat increased. The results were sufficiently encouraging to warrant the department's decision to continue further tests with it during 1930.

EXPERIMENTS WITH CHEMICALS FOR THE ERADICATION OF WEEDS.

During the year 1929 the Field Crops Branch conducted numerous experiments throughout the Province with various chemicals that are now on the market for the eradication of perennial weeds, such as sow thistle, Canada thistle and quack grass; also of common annual weeds, such as the mustards, stink weed, etc.

Those chemicals which had chlorates as their base were the most effective. Arrangements have been entered into with the National Research Council to conduct further tests with various kinds of chemicals for the eradication of different kinds of weeds.

WEED INSPECTORS' DIPLOMA COURSE.

For the first time in the history of the Province, a diploma course for weed inspectors was held at the University of Alberta under the direction of the Field Crops Branch, for a period of one week. About one hundred and seventy-five candidates were in attendance, of which number one hundred and twenty-five were successful in obtaining an Interim Weed Inspector's Certificate. When holders of this certificate have completed one season's satisfactory work in the field they will be given, by the department, a permanent certificate.

It was decided to hold a similar course in February, 1930.

WEED WEEK.

A week was set aside, in the first part of July, to draw to the attention of the people of this Province, the seriousness of the weed menace and to solicit their co-operation in an endeavor to not only keep our agricultural lands free from noxious weeds, but also to make a campaign 100% effective against particularly the perennial sow thistle, which is now to be found general in every part of the Province, where there has been cultivation for any considerable period of time. Radio talks, lectures and newspaper articles were much in evidence during this week.

BETTER SEED WEEK.

A "Better Seed Week" was held in March. Different agencies in the Province, such as the Dominion Government, the experimental farms, banks, machinery companies, and others, were asked

to co-operate in bringing to the attention of Alberta agriculturists the value of registered and pure seed. Many radio talks, lectures, and press articles, added to the effectiveness of the week, which was generally conceded to be fruitful with results.

BINDER ATTACHMENTS.

Owing to extreme drought in a large area of this Province an extremely short crop was the result in many parts.

It was quite evident some time before harvest that it would be quite impossible to harvest much of the crop with an ordinary binder. Much work was conducted by the department in working out the best method of harvesting so as to salvage most of the grain. A header-barge arrangement was very effective, as was also another cheaper attachment to binder which dropped the heads in bundles on the ground. Both of these attachments or others designed after these, saved many thousands of bushels of grain from going to waste in the fields.

PORTABLE GRAIN CLEANERS.

The Field Crops Branch was entrusted with assembling, experimenting with and perfecting a combination of grain cleaners mounted on a truck to be moved from one farm to another to clean grain fit for seed. Five of these machines will in a short time be working in the Province.

Report of the Game Commissioner

(BENJ. LAWTON)

Conditions generally have been reasonably satisfactory, although it must be admitted that certain species of wild life are becoming less in numbers. This is more noticeable in the case of fur-bearing and fur-producing animals. Rabbits, which constituted the main food supply of some of our more valuable fur-bearers, have not recovered from the scarcity of a few years back. Ordinarily these animals die off approximately every seven or eight years and gradually return in greater numbers until they again reach the maximum. For several years trappers and others, as opportunity offered, have been killing what is commonly called the snowshoe rabbit for its pelt. While this may be justifiable at certain times when the supply is in excess of the requirements of those who require them for food, it would be much better if, during the periods of scarcity or when the supply is below normal, the sale of the pelts was discouraged. The fox, lynx and wolf, more particularly the prairie wolf, depend on rabbits to a greater or less extent for their food supply. With the scarcity of rabbits the number of foxes, lynx and prairie wolves fall off in numbers, with the result that persons in the northern half of our Province depending on trapping for a livelihood to some extent suffer for lack of food and clothing.

If we are to conserve our fur supply it will be necessary to adopt some system of regulating trapping operations. The present system, which may be properly classified as being competitive, allows a trapper to select any area of unoccupied land on which to carry on his trapping operations. There are no regulations which prevent any other trapper from encroaching on the area that may be so selected or from preventing other trappers from squatting on trapping grounds occupied by other trappers in previous seasons. Under these conditions there is no incentive to the trapper to leave a sufficient number of any species to provide a supply for the future. This situation can only be improved by giving a trapper the sole right of trapping on a specified area with a reasonable guarantee that during succeeding seasons he will be given the preference on any such area. It is believed that this would be much more advantageous to all interested in the matter of conserving the supply of game and fur-bearing animals, and which would assist greatly in the prevention of fires, as where any such trapper had the sole right of occupancy on any such area for trapping purposes it would undoubtedly be justifiable to require him to assume responsibility for any fires found burning in his territory.

Statistics compiled from fur tax collections show that there was an increase in the total number of pelts produced as well as in the total value of production for the Province for the year ending June 30th, 1929. An advance in prices of certain species of pelts

would account for this to some extent, but the present fur season commencing with July 1st, 1929, indicates a possibility of the supply for the season falling considerably below that for the season 1927-28 and 1928-29.

The increase in the number of red squirrels killed for their pelts resulted in legislation being enacted for the protection of these interesting animals. In the past it was permissible to kill them at any season of the year; the open season now extends from November 1st to April 1st following. The trapping of these animals in the northern sections saved the situation for many trappers who otherwise would not have secured a sufficient revenue from trapping to meet their requirements in the way of food and clothing.

ALBERTA FUR PRODUCTION FOR SEASON 1928-29.

Kind.	Number of Pelts.	Total Value of Pelts.	Av. Value per Pelt.
Badger	17,466	\$ 384,252.00	\$22.00
Bear	1,227	9,816.00	8.00
Beaver	845	21,125.00	25.00
Coyote or Prairie Wolf	24,315	437,670.00	18.00
Ermine	267,575	401,362.50	1.50
Fisher	58	3,480.00	60.00
Fox, Blue	8	400.00	50.00
Fox, Cross	894	53,640.00	60.00
Fox, Red	1,545	46,350.00	30.00
Fox, Silver	2,097	157,275.00	75.00
Fox, White	13	585.00	45.00
Fox, Kit	48	120.00	2.50
Lynx	1,667	50,010.00	30.00
Marten	1,600	48,000.00	30.00
Mink	2,672	40,080.00	15.00
Muskrat	537,556	645,067.20	1.20
Rabbit	193,461	19,346.10	.10
Otter	229	6,870.00	30.00
Raccoon	9	45.00	5.00
Skunk	6,985	17,462.50	2.50
Squirrel	606,005	121,201.00	.20
Timber Wolf	186	2,790.00	15.00
Wolverine	282	5,640.00	20.00
Caribou	1	5.00	5.00
Deer	4	6.00	1.50
Moose	26	130.00	5.00
Gopher	1,502	75.10	.05
House Cat	1,275	382.50	.30
Dog	11	5.50	.50
	1,669,562	\$2,473,191.40	

BIG GAME ANIMALS.

Moose.—In the areas tributary to the mountains and to the west and north of the Pembina and Athabasca rivers moose are still reasonably plentiful, but in the area between the North Saskatchewan and the Beaver river the supply has been greatly depleted in recent years. This has been due to a great extent by the settlement of the district, forest and other fires, as well as illegal hunting.

Deer.—For some years these animals have been gradually becoming less in numbers to the south of the North Saskatchewan river and to the east of the Canadian Pacific Railway from Edmonton to Macleod. The adoption of the close season in this area in 1929 should permit their numbers to increase. In other suitable sections the supply is still holding fairly well.

Woodland Caribou.—It may be necessary in the near future to give these animals protection by declaring a close season in certain

areas. Their present range is much more limited than that of the moose or deer.

Elk.—These valuable big game animals are increasing, and in the near future it may be advisable to allow some hunting under such restrictions as will prevent excessive killing. The area between the Pembina and Brazeau rivers, which has been closed to all hunting, has proven to be an excellent breeding ground for these animals.

Antelope.—These are increasing, and it will be necessary in the near future to adopt some method of control. It would undoubtedly be to the advantage of the different herds to eliminate some of the older animals. The matter of issuing special licenses for this purpose may be found advisable.

GAME BIRDS.

The supply of game birds is gradually growing less from year to year and from period to period. This must be expected in the case of those that are affected by the development of the country, which reduces the cover as well as the feeding grounds. The supply of water for water fowl is gradually growing less, due to the gradual evaporation following the cutting of brush, timber, and the cultivation of the land. The Sharp-tailed Grouse, which is commonly known as Prairie Chicken, does not take kindly to the opening up of the country, as this bird is more inclined to favour the wild brushy areas. It may be possible that its habits will change and adapt itself to the changing conditions. The Pinnated Grouse, known as the Prairie Chicken in the Western United States, has established itself in the Province, but for some unknown reason has not increased as rapidly as was expected. These birds are inclined to favour the open and cultivated areas to a greater extent than the Sharp-tailed.

Ducks and Geese have been gradually growing less and less from year to year, and it is being seriously considered in many of the provinces and states as to the advisability of reducing the daily and season bag limits. The United States Government has reduced the daily bag limit on ducks for the whole of the United States to fifteen per day.

Hungarian Partridge (European Grey Partridge).—These valuable game birds are still thriving, and are evidently a fixture in the Province, but will, in all probability, to some extent be affected by the same or similar diseases as those which affect our Grouse. These birds, in conjunction with the Sharp-tailed Grouse, will undoubtedly prove a splendid addition to those of our birds which destroy worms, weed seeds and insects, and who assist greatly in controlling destructive species of worms, insects and weed seeds.

BIRD SANCTUARIES AND PUBLIC SHOOTING GROUNDS.

During portions of June, July, August, September and October, in conjunction with representatives of the Dominion Government, I visited a number of the Bird Sanctuaries and Public Shooting Grounds for the purpose of ascertaining the suitability of these

for the purpose for which they were set aside. In every inspection the areas selected were approved of. It was surprising to find the number of lakes which had been seriously affected by the dry seasons, the waters having receded from normal to such an extent that there were broad strips of dry land which were formerly covered with water. It is noted that this is a condition that periodically occurs to a greater or less extent. It is noted also in connection with Public Shooting Grounds that there are many areas which have become privately owned which provide excellent shooting, more particularly with respect to water fowl. It is noted that areas abutting on lakes which would have been admirably suited for recreational purposes have become privately owned, and in many cases the public have no access to bodies of water for any purpose whatsoever. The matter of preventing Bird Sanctuaries from becoming infested with pests destructive to bird life will of necessity have to be dealt with if the purpose for which the areas have been reserved is to serve the purposes intended.

THE DESTRUCTION OF CROWS AND MAGPIES, ETC.

Regulations were again adopted for 1929 as in previous years to provide for the payment of prizes to competitors who destroy these pests. It was thought advisable to credit those who killed crows, magpies, and gophers, and who destroyed eggs of crows and magpies with a greater number of points for such trophies as they turned in for credit before July 1st. This evidently had the desired effect—that is, the destroying of a greater number of the above mentioned pests during the period when they are most destructive to other birds. The result of the competition shows the following:

Crows and Magpies.	Gophers.	Crows and Magpies' Eggs.
54,418	260,501	202,818

THE TOTAL DESTROYED BY SCHOOL CHILDREN.

Crows and Magpies.	Gophers.	Crows and Magpies' Eggs.
35,922	199,805	152,481

THE TOTAL DESTROYED BY ADULTS.

Crows and Magpies.	Gophers.	Crows and Magpies' Eggs.
18,496	60,696	50,337

FUR MARKETING SERVICE.

The Fur Marketing Service was continued for the season of 1928-1929, extending to the end of September, the total turnover being \$84,163.60. This consisted of 2,181 shipments from 1,212 shippers. The surplus over and above the cost of operating was \$254.76.

PRAIRIE AND FOREST FIRES.

During the year 1929 there were very few destructive forest fires. A number of prairie and brush fires occurred more particularly during the fall, and owing to the extremely dry condition of the soil numerous ground fires became established and frequently spread and caused the destruction of considerable personal property as well as quantities of hay and other feed. Some of the Forest Reserves were closed to all travel until early snows justified again

opening them up and allowing those who wished to travel throughout the reserves, more particularly big game hunters, to again exercise the privilege. Efforts will be put forth during the winter months to extinguish as many of the ground fires as possible, thereby reducing the menace from this source during the spring and summer.

RAILWAY FIREGUARDS.

Inspections of railway fireguards and railway rights-of-way to ascertain as to whether the same had been constructed or the rights-of-way burnt over to prevent fires from spreading from the railways was carried on. Splendid co-operation was given by all the officials of the different railways, with the result that very few fires occurred along the railway lines in comparison with former years.

Report of the Poultry Commissioner (G. M. CORMIE)

On January 9th, 1929, for the first time in the history of the Province, a car-load of new laid winter eggs was shipped out of Alberta. It is not long since it was considered impossible to get production in the prairie provinces in winter. Each year, however, brings a greater winter production, and we believe the time is not far distant when Alberta will no longer require to import new laid eggs at any season; indeed, winter production is likely to be attained with such certainty as to do away with the need of storing eggs for winter consumption.

POULTRY-RAISING MORE POPULAR.

Since winter production has been found possible, poultry-raising as a part of the regular farming operations is being more generally adopted. A steady weekly cash income from the poultry flock, regardless of crop conditions, is enjoyed by those equipped to properly take care of their poultry. A daily cash income of \$5 from the farm flock is not unusual, and appeals even to the large grain farmers in the southern and eastern parts of the Province.

FATTENING POULTRY ON THE FARM.

A definite program was instituted this year to encourage the finishing of poultry on the farm. At five points, namely, Lethbridge, Killam, Hardisty, Tofield and Vegreville, community efforts were undertaken. At Killam and at Lethbridge a car-load was fattened, killed, dressed and packed for shipment by the farmers themselves. At Killam 4,500 of as fine milk-fed cockerels as were ever shipped out of Western Canada were assembled. The other three points did not have full cars, but the quality was first class, and the experiment in finishing on the farm was a decided success. The final price to the farmer for the finished product assembled at country points was considerably above that obtainable by shipping alive.

Killing and dressing demonstrations were conducted by officers of this department at Castor, Camrose, Meeting Creek, Donalda, Willingdon, Hairy Hill, Two Hills, Vegreville and Westlock. The purpose of these demonstrations was to show the producers how best to prepare their product for market, so that they might assemble car-loads of dressed poultry at country points rather than ship the live birds to assembly stations. These demonstrations were well attended and greatly appreciated, and resulted in very satisfactory work being done by the farmers themselves when they undertook to kill the poultry on the farm.

FLOCK CULLING.

The demand for flock culling service during the year was much greater than it was possible to provide with the limited staff available. To economize in time and expense and to extend its usefulness, the service was restricted to districts where groups of farmers made application for it, and then only during the late summer and early fall months when the pressure of other work was lightest. However, during the year hundreds of visits and demonstrations in flock culling were made when those desiring the service happened to live on the line of travel of our field men in discharging their duties in connection with the more important policies of the branch.

ALBERTA ACCREDITED FLOCKS.

The Alberta Accredited Flocks, from a single unit of twelve members organized in 1926 in the Vegreville district, has grown until today there are eight units with a total membership of upwards of four hundred. The various units are located at Lethbridge, on the Lethbridge Northern Colonization project, Brant, Daysland, Hardisty, Lamont, Vegreville, Vermilion, and Lloydminster. The largest unit is at Lethbridge, where the membership is 125.

The salient points of the Accredited Flock Scheme are as follows:

(1) Only one breed in a district is recognized; example, at Lethbridge, Barred Plymouth Rocks is the breed chosen; at Vegreville, White Wyandottes; Hardisty, White Rocks; and so forth.

(2) It is a part of the scheme that all members must have modern and uniform poultry houses, brooder house, brooder stove and equipment.

(3) All members commence with 250 baby chicks of the breed chosen by the group for that district.

(4) By having the membership closely grouped supervision on a large scale is possible, one inspector making as many as ten visits in a day. As a result inspection is provided at frequent and regular intervals.

(5) Each unit, although self-governed, is linked together with the other units through the hatchery organizations located at Vegreville and Lethbridge. This association makes it possible to buy supplies in car-load lots and to sell in a like manner. Recently the Brant Association brought in a car-load of Argentine corn and were able to supply its members with the best quality corn available at a considerable saving over small local shipments from Calgary. Eggs are available in quantity, making it possible to supply large hotels, hospitals and the like. Sometimes two or three groups combine their orders and buy direct from the manufacturer or wholesale house. This particularly applies in the case of brooder stoves, breeding cockerels, corn, and meat scraps.

(6) By having only two or three hatcheries to take care of the requirements of all groups, the overhead of hatchery operation is greatly reduced. The efficiency of the hatchery is increased by having a constant and adequate egg supply and assured outlet for the chicks. The members profit by having an assured market for their hatching eggs at a price usually double that of market eggs.

(7) On account of all members in a unit having the same breed, the same style of house, the same system of feeding and management, and the same supervisor, their problems, being similar, are more easily solved and rectified.

It is a part of the Accredited Flocks plan that only cockerels from hens with records of 200 eggs or more are used for breeding

purposes. All females used as breeders must be pure-bred, free from disqualifications, and of correct type and weight for the breed. They must be healthy, vigorous, bred-to-lay stock, and must lay eggs 23 ounces to the dozen or better.

BABY CHICKS.

The two hatcheries connected with the Accredited Flocks organization, located at Vegreville and Lethbridge, turned out approximately 140,000 chicks. These were largely of the heavy breeds, Barred Rocks and White Wyandottes predominating. White Leghorns were hatched in fairly large quantities, and were in demand later in the season. Small quantities of White Rocks, Rhode Island Reds and Buff Orpingtons were custom hatched for a few breeders having good stock. Rhode Island Reds and White Rocks are becoming quite popular. Breeders of these varieties are enjoying good demand for their stock.

ALBERTA APPROVED FLOCKS.

The Alberta Approved Flocks scheme was inaugurated in the fall of 1927. This project is intended to stimulate interest in better breeding. Its main object, however, is to locate and organize those poultry-raisers in the different districts who are recognized as having the best poultry in the district into one provincial-wide organization, known as the Alberta Approved Flocks, and to encourage winter egg production, the keeping of records, and by trap-nesting for the four winter months, November, December, January and February.

The winter trap-nesting has been readily adopted by the farmers, coming at a time of year when they have time to devote to it. The winter trap-nest test is generally recognized as being a reasonably accurate indication of the bird's ability to produce during the balance of the year.

One of the outstanding features of this scheme is in making available a supply of good hatching eggs for private hatcheries operating within the Province. The cockerels produced from the approved and certified females are much to be desired as breeders in preference to cockerels of equal weight and appearance but from unknown ancestry.

The growth of the organization is an indication of the popularity of the scheme. In three years it has grown from eleven flocks comprising 738 birds completing the first test, to a present entry of 49 flocks with a total of 2,920 birds. It is interesting to note that the quality of the stock entered has shown a steady improvement. Definite steps have been taken this year to further organize the scheme, so that the monthly inspection during the period of the test may be continued at a minimum expense in time and money.

THE ROYAL INTERNATIONAL SHOW.

Alberta exhibitors at the Royal have again brought great credit to the Province, and are to be congratulated on the fine quality of poultry they have sent to this international show.

A total of 65 birds exhibited from this Province won the following prizes: 10 Firsts, 11 Seconds, 6 Thirds, 1 Fourth, and 1 Fifth.

The results demonstrate the high quality of exhibition and production poultry bred in the Province, and fully justify the breeders and the department in the preparation and shipment of the exhibit.

The following is a list of the winners:

Jas. S. Lynch, Calgary.
 T. Lyttle, Calgary.
 H. Powell, Calgary.
 Alex. Cheyne, Calgary.
 Dr. J. E. Wilkinson, Edmonton.
 R. S. Johnson, Rainier.
 F. S. Wetherall, Calgary.
 T. W. Gordon, Edmonton.
 Gilbert Young, De Winton.
 Mrs. Wm. Elliott, Irricana.
 Wm. Miller, Edmonton.

TURKEY IMPROVEMENT.

Definite plans for organized turkey improvement work in Canada were first considered at the World's Poultry Congress in Ottawa in 1927.

Immediately following the Congress, the Alberta Bronze Turkey Breeders' Association was formed to undertake a system of improvement known as "Record of Merit" for turkeys. The same year the association approached the Dominion Government, requesting official inspection under a definite plan. That year 1,050 birds were inspected and individually identified for 50 breeders. These birds were readily disposed of and were valued at \$12,600.00. In 1928, 150 breeders had 2,500 birds approved. These were sold without difficulty by the breeders themselves and the association, and were valued at \$30,000.00. The 1929 crop, while not so large in numbers, owing to poor crop conditions in many parts of the Province, was much superior in quality to anything heretofore produced. In all, 2,000 birds were approved for 150 breeders, the estimated value being \$30,000.00. In August, 1929, the turkey improvement work commenced under Dominion jurisdiction was taken over by the Province as a part of the Poultry Branch activities.

The following rules and regulations as adopted by the Alberta Bronze Turkey Breeders' Association fully describe Record of Merit for turkeys as it applies in Alberta.

RULES AND REGULATIONS.

Upon receipt of application with fees fully paid, the Alberta Bronze Turkey Breeders' Association, in co-operation with the Poultry Branch, Alberta Department of Agriculture, undertakes to approve and band pure-bred turkeys from the breeders' flocks.

Provided that:

1. The breeder's entire flock has been officially inspected prior to February 1st preceding the hatching of such birds, that all birds allowed to remain in such flocks have been officially banded with a special sealed band approved by the Department and the Association, and bearing the year of inspection, the R.O.M. standing for Record of Merit, together with a letter indicating the grade, and a serial number, and that all birds not

approved by the inspector have been removed from the flock by March 1st following inspection.

2. In the event of it becoming necessary (due to any cause) to make any changes in the male birds heading flocks, such changes must not be made without the approval of an official inspector, otherwise the birds hatched from the eggs of such flocks will not be inspected and approved.

3. All birds to qualify for breeding purposes must be inspected, approved and banded by an official inspector.

4. All applications for approval and banding of flocks must reach the Secretary-Treasurer of the Association previous to November 30th.

5. Entrants shall use the prescribed forms, which may be obtained on request from the Secretary of the Association or from the Poultry Branch, Alberta Department of Agriculture, Edmonton.

6. Entry fees shall accompany the application for entry, and should be forwarded in the form of a post office money order or express order or certified cheque made payable to the Secretary-Treasurer of the Alberta Bronze Turkey Breeders' Association.

The scale of fees will be as follows:

No. of birds.	Fee.
1 to 25	\$ 5.00
26 to 50	7.50
51 to 100	10.00

Over 100, \$5.00 for every additional 100 birds.

INSPECTION.

7. Only birds that have no standard disqualifications, that are good utility type and weight, and that appear healthy and vigorous at time of inspection, will be approved and banded.

8. If upon first inspection the birds appear to be diseased or lacking in vigor, or the houses and equipment are not in good sanitary condition, or the general surroundings are unsatisfactory, entry may be refused.

9. All flocks will be placed under unannounced inspection. Official visits may be at regular intervals.

10. The fullest information shall be given to official inspectors, and any entrant who offers opposition renders his entry liable to cancellation.

11. The owner or entrant may, upon written notice to the Secretary-Treasurer, withdraw all of his entry or individual birds at any time.

12. In the event of any entry being cancelled because of attempted fraud on the part of the entrant or because of the failure to observe the rules, the Association may refuse to accept entries or extend inspection to the same breeder for a period of two years.

13. The receipt by an entrant of written notice that official inspection is being discontinued shall constitute notice of cancellation of entry.

14. In the event of any question arising, the ruling of the Association will be final.

15. For further particulars in reference to the Record of Merit for Turkeys, enquire of the Secretary-Treasurer of the Association, or the Poultry Branch, Alberta Department of Agriculture, Edmonton.

The importance of the turkey improvement work as a means of increasing the value of the annual turkey crop is shown by the following table compiled in the Rainier district, where practically all breeding turkeys are R.O.M. approved.

COMMUNITY TURKEY MARKETING, RAINIER DISTRICT, SHOWING STEADY INCREASE AVERAGE WEIGHT OF DRESSED CARCASS.

Year.	No. of Head.	Total weight.	Average weight dressed carcass.
1922	986	9,346	9.4
1923	1,301	12,604	9.68
1924	933	8,379	10.
1925	567	6,218	10.6
1926	813	8,136	10.
1927	450	5,167	11.4
1928	448	5,417	12.1
1929	830	10,596	12.7

It is interesting to note that although the average weight of the market birds is 12.7 in 1929, it represents only part of the turkey crop, as most of the larger specimens were held back as breeders to be inspected under the Record of Merit policy. The Rainier district produces more breeding turkeys than any other district in the Province.

Alberta Government Approved R.O.M. turkeys have been sold mainly in Western Canada and Ontario. Several have gone to the States, and one shipment at least to the British West Indies.

The production of turkey breeding stock is a new industry for Alberta, and promises to develop into an important one.

PROVINCIAL POULTRY FARM.

The Oliver poultry farm this year is well supplied with breeding stock. The young stock raised are a decided improvement over that of the last two years. A number of R.O.P. approved and registered cockerels with records up to 325 eggs have been secured to head the best pens.

Barred Plymouth Rocks, White Wyandottes, and White Leghorns are the breeds carried at present. All pullets are trap-nested during the entire year, and those that produce 200 or more 2 ounce eggs in the traps are considered worthy to be placed in the best breeding pens, provided they are true to type, of standard size, and free from disease.

This year Barred Rock pullet No. 304 laid 303 eggs in its pullet year.

Unfortunately, in the late fall a serious epidemic of Contagious Bronchitis broke out on the farm. Infection was evidently carried on a crate that was used to bring in the pullets from the range. As a result of this epidemic a considerable number of birds died, especially among the pullet pens. A great many experiments were carried on by Mr. Hare, Plant Manager, in an effort to find some simple treatment. As a result of these experiments, a treatment was found which reduced the mortality from 30% in house No. 6 to 9% in house No. 2. A complete report of the methods employed has been compiled.

In keeping with the development of the turkey industry in this Province, a first class flock of Bronze turkeys has been added to the Poultry Plant. It will be the purpose of the plant to import new stock from time to time in order that a source of supply of new blood lines may be made available to the farmers of the Province. The foundation stock is composed of A grade birds only, of standard weight or better. Each bird was carefully selected from the best flocks in the Province.

The Poultry Farm is co-operating with the Poultry Branch of the University in carrying out a number of experiments. These are not sufficiently advanced at this time to comment on them. To this end, however, some special stock and equipment have been secured.

Report of the Provincial Veterinarian

(DR. P. R. TALBOT)

The work of the Provincial Veterinarian during the year 1929 has comprised the following: Lectures on diseases of live stock at the various Schools of Agriculture and on Veterinary Science at the University of Alberta; the prevention and eradication of non-contagious diseases in the Province; the general supervision of the health of live stock of Alberta, as well as at the different Government institutions; the supervision of experiments—in conjunction with the University of Alberta, at farms under Government supervision, along the following lines:

1. Bovine Infectious Abortion.
2. Bovine Tuberculosis.
3. Avian Tuberculosis.
4. Bacillary White Diarrhoea.
5. Swine Parasites.

EXPERIMENTAL WORK.

Contagious Abortion in Cattle.

In my report for the year 1928, I mentioned some experimental work being done at one of the demonstration farms on this disease. It was explained that ten heifer calves were secured, and when the Agglutination Test was applied, all gave a negative reaction. These animals were then inoculated with Abortion Vaccine (living organisms) and are now being bred. They will later be inoculated with a virulent strain and watched carefully in order to see whether immunity has been produced. On account of the scarcity of feed in the Province this year, we were not able to place with these animals an equal number of heifers for comparative purposes. We think, however, that this can be done later on during the year, and the information will be published in due course. Because of the interest given throughout Canada to the application of the Agglutination Test for Contagious Abortion, and on account of statements made by some investigators, that there was a possibility that the same organism causing this disease may produce an illness in the human family, we decided to apply the above-mentioned test to one of the herds stationed at a Government institution where Contagious Abortion had been prevalent some years ago. Seventy-one head of cattle were given the Agglutination Test for Contagious Abortion, and out of this number fifty-one gave a negative reaction. In connection with the twenty cows that were positive to this test, the history of these animals showed that four had previously aborted twice; two had aborted once; and eleven had never aborted. As far as our work is concerned, in no case did we get a positive reaction in male animals.

In reference to vaccination against this disease, we have noticed with interest that the investigations by the British Commission, under Sir Stewart Stockman, indicate that by the use of a single injection of live organisms abortion on badly infected farms has been reduced in some instances from 40% to less than 4%. We have also a report from the Imperial Board of Health, Germany, stating that immunization against Contagious Abortion by vaccination has given excellent results. Many investigators are opposing strongly the use of a live vaccine in the prevention of Contagious Abortion. However, it is recommended only for heifers in herds where the abortion infection has secured such a foothold that other measures of control would be useless. The use of dead cultures of *Bacillus Abortus* has not been shown to produce a satisfactory degree of immunity, although a few investigators claim beneficial results following the use of it, but only for a short period of time. We understand that the British Government under the direction of the Minister of Agriculture, is now supplying the cattle breeders of Great Britain with a product that is apparently producing satisfactory immunity. It is called a devitalized vaccine, and although the organisms contained in it are killed by heat, this is done in such a way as to preserve those integral properties necessary for immunization. This institution is supplying it at barely the cost of production, that is 3d (6 cents) per dose, and it is claimed that many outbreaks have been arrested at their onset and serious losses have been avoided by its use. We are under the impression that some time Contagious Abortion in cattle will be controlled entirely by some form of vaccine that will be simple to administer, effective as a preventive and available to the breeder at very little cost.

Mineral Deficiency in Swine.

During the past year an experiment was started with swine at two of the Provincial Demonstration Farms to determine, if possible, the effect of minerals in their diet. The objects of this experiment were as follows:

1. To compare the gains of pigs on basal ration with those on basal ration plus pasture.
2. To compare the gains of pigs on basal ration and on pasture with those of pigs on basal ration and potassium iodide.
3. To compare the gains of pigs on basal ration with those on basal ration and potassium iodide.

This work is being done by the Animal Husbandry instructors at the various Schools of Agriculture, and the results of this will not be known until the animals are slaughtered.

Swine Parasites.

This important question has been carefully considered by our branch for several years past. For the last two years we have been requested at the Swine Breeders' meetings to supply some information regarding the results and extent of infestation. In order that we should have all the available information obtainable, we visited various packing plants, and found that the number of swine affected with the round worm coincided with reports previously given us by the offices of the Swift Canadian Company

and the P. Burns Company. It was found that in some sections of this Province the infestation was much higher than in others. But we noted that even in those districts where the rate of infestation was rather high, there were numerous herds that were entirely free from it. We refrained from giving the subject of swine parasites a very great amount of publicity, as far as this Province was concerned, for the following reasons:

For a number of years we have had a disease in hogs that is familiarly known as Hog Pneumonia. We were unable to determine if this lung trouble was caused by the invasion of the round worm during its life cycle or not. To make matters clear, we should explain that the life history of the round worm in swine is as follows: The worm egg is passed off with the pig feces, and after going through certain changes of development, providing conditions are favorable, is taken up usually by the little pig. After reaching the small intestine of the young pig, the shell of the egg is dissolved and the young worm is released. Once free, it penetrates the wall to reach a blood vessel, and is carried to the liver, there to go to the heart and later to the lung, where it remains for a period of about eight days. It then passes up the trachea or windpipe to the throat, to be coughed out or swallowed. If swallowed, it returns to the intestine, where it may lodge and grow to maturity in from six to eight weeks.

It will be understood that the period of time spent by the larvae in the lung is likely to produce some damage to the tissue of that organ, and it was natural to suppose that parasites were producing this swine pneumonia that is fairly prevalent in Alberta. If this were true, it would mean a most serious situation and would necessitate a general campaign throughout the Province, regardless of cost, to destroy the round worm in hogs.

In order to eliminate the possibilities of mistakes, with the assistance of Dr. Shaw, Assistant Bacteriologist, University of Alberta, we undertook a series of experiments, and proved to our satisfaction that the disease known as Swine Pneumonia in Alberta was produced by a germ belonging to the same group as Hemorrhagic Septicemia, that it could be produced by inoculation, that the period of incubation was about four days, and that the animals affected frequently recovered, but upon post-mortem, it was likely found that there would be destruction of some part of the lung tissue, or a solidification of part of that gland.

Regarding the extent of parasites in hogs, we are of the opinion that a survey of the areas most badly infested, based on the reports of the various packing plants, might be made and suggestions offered to those swine breeders known to have badly infested herds, but we hesitate to advocate the general treatment of all swine when we are sure that many farms are entirely free from parasites. With the co-operation of the animal husbandrymen at the demonstration farms, and the various agricultural agents at different points throughout the Province, we hope to work out some programme that will assist in controlling this trouble.

In discussing swine parasites with several Ontario swine breeders recently, we found they felt that although various sections

and certain farms were no doubt badly infested, they thought the problem could be combatted in a scientific and practical manner without putting unnecessary expense upon owners of herds where treatment was not required. It has been stated by some breeders in that Province that they have discontinued breeding operations entirely for the reason that if this trouble is as serious as the posters and other literature distributed would indicate, then the raising of swine is not worth while.

Bovine Tuberculosis.

The experimental work being conducted with this disease is being carried along in the same manner as in previous years. It is as formerly under the direction of the National Research Council, the Chairman of which is Dr. H. M. Tory. Full information regarding the experiments carried on in the Province of Alberta can be obtained from the above source if desired.

In addition to the work attempted under such direction, we have also several herds being vaccinated with Raw's vaccine, as well as that of Calmette. We are perfectly satisfied with the results obtained by vaccination so far, and it is anticipated that within a few months we shall have one herd completely immunized against tuberculosis. It will be understood, of course, that the only animals slaughtered from this breeding herd have been the old cows that have been vaccinated and the younger cattle of undesirable color and conformation. As far as the last mentioned are concerned, no evidence of tuberculosis has been found upon post-mortem.

In addition to the work being conducted with the National Research Council, we have a large number of calves vaccinated with both Calmette and Raw's vaccine. Some of these animals have been vaccinated three times, and their progeny have also been vaccinated. This work is being kept under close supervision, and we think satisfactory results will be obtained.

Avian Tuberculosis.

With the assistance of Dr. Rankin, Dean of the Medical College, and Dr. Shaw, Assistant Bacteriologist, Provincial Laboratory, University of Alberta, we conducted an experiment with avian tuberculosis during the past year. In May, approximately one hundred baby chicks were vaccinated with Calmette vaccine at one of the Government institutions. The vaccine was given in the following manner: Each bird was given one milligramme of Calmette vaccine by the mouth. This dose was repeated on the fifth and seventh days after they were hatched.

Of the 100 birds vaccinated, 24 were lost when a few weeks old, from various causes—crows and weasels being the chief offenders. Of the 76 remaining, 29 were cockerels, and in December it was decided that the latter be killed for investigational purposes. A careful examination was made of them, and none showed lesions of tuberculosis.

Bacillary White Diarrhoea.

Very little experimental work was done in connection with this disease during the past year, but in 1928 a careful survey of the province was made in order to find out to what extent the condition was prevalent. In order to obtain information from every possible source, regarding this disease, a meeting was called of the various poultry men, to gather opinions as to the proper policy to be followed, and to obtain their views as to the advisability of a general testing for Bacillary White Diarrhoea. There were different suggestions made at this gathering, and it was felt by some that an effort should be made to see if the disease could not be combatted along preventive lines, rather than by wholesale slaughter of reactors. It is intended to conduct work along the above suggested lines in the spring.

It had been indicated by several sources that this condition existed in wild fowl in this Province, especially in prairie chickens, and we were able to secure several sittings of eggs that were later placed in the incubator at the Poultry Plant, the purpose being to keep under supervision the young chicks, in order to see if they were infected with the disease or not. Unfortunately, these eggs proved to be non-fertile, and consequently no results were obtained.

Fur-bearing Animals.

Owing to the numerous inquiries that have been received in this branch from trappers, fur-farmers and others, not only in this province, but in practically all the others as well, seeking information regarding diseases of mink, muskrats and foxes, this department has endeavored during the past few months to collect information along these lines. There were apparently some lakes in Alberta that were not suitable for muskrat farming, and we obtained an analysis of the water from these different places in order to see if the trouble could not be traced to this source. We are not in a position as yet to state definitely the results of our findings, but it is our intention to carry on this work during the coming year, and I trust that much useful information will be obtained.

Weed Poisoning.

During the past year a great many cases of weed poisoning were reported and investigated. We believe the number of animals lost from this cause was considerable. This will probably be accounted for by the fact that many of the sloughs were dried up and animals were seeking succulent foodstuffs in the low-lying lands. It is impossible to state the number of animals lost through Water Hemlock poisoning, but if the data were attainable we are sure it would be considerable. In Southern Alberta, Mr. Jas. Murray, District Agriculturist, Medicine Hat, and myself made a careful investigation into reported sheep losses due to weed poisoning in the vicinity of Jenner and Atlee. Upon investigation, it was discovered that the animals had been grazing on pasture land that was badly infested with Death Camas. This plant grows in sandy soil, on the slopes of hills usually facing south. Losses from it

are considerable when the animals are hot and hungry, and unless the antidote is given immediately many deaths will result. Shepherds acquainted with the plant avoid these patches of Death Camas, as they know from experience that animals should never be grazed on them unless they have first been placed on good forage for a few hours previously. The antidote is a very satisfactory one, and consists of one dram each of Potassium Permanganate and Aluminum Sulphate, dissolved in a pint of water. This quantity is sufficient for about twelve sheep.

STALLION ENROLMENT.

Owing to the lack of interest in horse-breeding, it will be noticed that the number of enrolments each year is slowly decreasing. It would appear as if most of the interest in heavy horses is occurring principally in the Grande Prairie and Peace River districts. The farm tractor is no doubt causing the depreciation of work horses in the central and southern portions of Alberta. Every year we have a considerable number of inquiries regarding the obtaining of good stallions, but the animals are noticeably more hard to secure. The market for heavy work horses during the past year has been practically at a standstill, and should climatic conditions interfere with tractor power during 1930, the interest in breeding and raising heavy horses might be stimulated. There has been an increased interest in thoroughbred horses in both the southern and northern portions of Alberta for the past twelve months. Mr. E. D. Adams, Secretary of the Thoroughbred Horse Breeders' Association of Alberta, has been consistent in trying to encourage the raising of racing stock and horses suitable for remount purposes. He has been instrumental in having several outstanding stallions of this breed imported from the Old Country during 1929. It is expected that the progeny of these animals will be a great acquisition to the light horse industry. During the past year a selection was made of mares throughout Alberta as being suitable for the crossing of thoroughbred stallions, in order to produce animals of the hunter type. This work has met with very favorable comment, and is looked upon with approval by horsemen generally throughout Alberta. It has been instrumental in arousing the interest of horsemen in the northern part of the Province, and efforts are being made at present to formulate light horse clubs in different districts, both south and east of Edmonton. Mr. Thomas Cronie, Calgary, who inspected the heavy stallions, has co-operated with us in every way in his work during the past year. The number of stallions inspected during the last twelve months is 95. The number of stallions, according to breed, that were enrolled with this branch for the past two years is indicated below:

	1928	1929
Percheron	216	188
Clydesdale	165	112
Belgian	79	61
Thoroughbred	14	12
Shire	24	16
Standard Bred	6	5
Suffolk	5	4
American Saddle	1	2
Jack	2	2
Hackney	1	1

Report of the Provincial Farms

(DONALD DOUGLAS, *Director*)

The crop of 1929 on the Provincial Farms was in most districts a very light one. With the lack of moisture from the previous fall the land was in a very dry condition in the early spring, although there was a good germinating seed bed, but with the continued dry weather and the lack of moisture it soon began to retard the growth so that in many districts the crop was a total failure.

Claresholm.—This farm produced a very good crop as conditions were very good, and there was plenty of moisture. Fall wheat yielded 42 bushels per acre; oats and barley also gave heavy yields.

Raymond.—This farm also had a good crop, as conditions in that district were favorable, with plenty of moisture and with rapid growth giving exceptionally good yields of grain.

Olds.—Although there was not as much moisture in this district as some of the others, there was a good crop of wheat, oats and barley; however, not as heavy as in some previous years.

Gleichen.—This district was very dry, making the yield very light. Wheat on summerfallow gave only a yield of 18 bushels per acre, and oats and barley on spring plowing were in most cases a failure.

Vermilion.—On this farm the crop was a total failure, owing to the extreme condition of the weather, dry hot winds and lack of moisture. Under these conditions we have to purchase all feed for the stock and seed for this spring's planting.

Youngstown.—This farm also had a total crop failure, the lack of moisture and the continued dry hot winds making conditions in this district the worst for a number of years. We have to purchase all seed and feed for the stock for this farm also.

Oliver.—Although conditions on this farm were not as bad as some of the others, the crop was light, as there was a lack of moisture in this district also. We have, during the summer, brushed and broken one hundred and forty acres of new land, so that with the addition of this to our crop rotation we hope to increase our production for next year.

LIVE STOCK.

All of our flocks and herds have done well during 1929, making satisfactory increases. There has been very little sickness.

Claresholm.—At this farm we have a herd of Ayrshire cattle which have done exceptionally well on the R.O.P. test. We exhibited three of these at the Royal Winter Show in Toronto. The young bull, "South Craig Prince John," a junior yearling, won first in a very strong class. "Auchenbrain Hannah 9th," as a two-year-old in milk, won eighth place against strong competition. This heifer

had been fresh for over two months before the show, making it more difficult to compete with other exhibits that had been fresh only a few days.

Olds.—At this farm, where our main herd are Shorthorns, we have some of the very best families of the breed. As herd sires we have "Cabus Hercules" (imp.), a straight "Augusta," who was exhibited at the Royal in Toronto as a two-year-old and won sixth place against very strong competition; also "Doune Ladas" (imp.), a straight "Lavender." From these two bulls as our herd sires and our present herd of high-class females, we hope to be able to breed some of the best type of Shorthorns in the Province. We also have a small herd of pure-bred Guernseys with a few grades of the same breed. The sires of this herd are two young bulls of exceptionally good breeding, winning second and fourth at the Royal in Toronto. A cow that was reserve champion in 1928 stood eighth in a very large class, being exhibited as a dry cow. As she was not due to freshen until spring, she had to compete with those who would freshen in a few weeks. We also exhibited at the Royal a pure-bred Hereford steer donated by Wm. McIntyre, of Magrath, which stood first as a junior yearling, and a pure-bred Angus steer of our own breeding, which won fourth as a senior calf.

Raymond.—Our herd at this farm is mostly pure-bred Holsteins with a few grades of the same breed. Our herd sire is a son of "Sir Sylvia Car Born" and "Hengerveld Pearl Nephele 5th," with a record of 23,676 lbs. milk and 3.77% butter fat test. As we have a number of high-class heifers due to freshen soon, we hope to put this herd on the R.O.P. test in the near future. In the past we have been keeping private tests only, as the larger share of the herd were mature grades.

Oliver.—The herd at this farm has done exceptionally well during the past year, a large number of the cows on R.O.P. test making very good records. The butter fat test of this herd is one of the best in the Western Provinces. The production of young stock has been good, giving us some very promising young females.

Vermilion.—The only dual purpose herd of Shorthorns that we have is located at this farm. We have some very good individuals, and in the past have made some good records. Our herd sire is "Neralcam Dominator," son of "Fairy Duke," one of the best dual purpose Shorthorn bulls on the continent.

Report of the Publicity and Statistics Branch

(H. P. BROWNLEE, *Statistician*)

Widespread interest in the Province of Alberta as a potential field along all lines of endeavor was evidenced in the number of enquiries and increased work devolved upon this branch for the year 1929.

Information on the various resources of the Province was sent to investors, financial houses and prospective settlers. Similar information was given wide circulation through articles published in many national newspapers and magazines. As a result of these a large number of enquiries have been received, our field has been expanding, and many benefits have been obtained.

Writers and lecturers have been furnished with informative material, such as articles and photographs, and in addition publicity has been secured through the co-operation of the newspapers. Much paid advertising has been carried on with very favorable results.

Special mention should be made of the great number of enquiries received during the year for homesteads and farm lands in the Province. As in 1928 a great many of these refer particularly to the Peace River country, and indicate the attraction this northern country has for prospective settlers. Included in the enquiries dealt with have been hundreds of letters from the eastern provinces of the Dominion and all parts of the British Empire.

STATISTICS.

Working in close co-operation with the Dominion Bureau of Statistics, much valuable information regarding agricultural and other forms of production has been recorded. During the year statistics were compiled in a publication entitled "Statistics of Progress, Alberta, 1906-1928." This information will be valuable to governments, financial and investment houses, statistical and colonization agencies, and prospective settlers.

EXHIBITS.

During the year grains, grasses and samples of natural resources were collected for exhibit purposes. In addition to appearing at the Provincial Seed Fair, Alberta exhibits were shown during the months of August, September and part of October in nine states and county fairs in the western central United States. At two of these—Topeka (Kansas) and Minneapolis (Minn.)—Alberta joined forces with the Dominion Government officials, which resulted in increased publicity. Minneapolis this year for the first time was open to our type of exhibit. The quality and artistry of the exhibit elicited much praise from the press and

general public. The interest in Alberta obtained by this means of publicity is recognized in the number of letters which have been received.

MOTION PICTURE BUREAU.

The motion picture bureau continues to play an important part in the educational and publicity work of the department. Extensive use has been made during the year of the films and lantern slides, and material has been supplied for a number of lectures on various topics. Worthy of special mention is the very comprehensive picture of "Wild Life in Alberta," which is in the making. This includes films showing song birds, game birds, and destructive birds, their nests, eggs, and young in their native haunts; Dominion bird sanctuaries, and some domestic life at the Benedick bird sanctuary, Leduc. Included also are furs and fur farming pictures of foxes, mink, skunk, racoon, fisher, rabbits, etc. The object of this picture is to interest the public in fostering and protecting wild life, and to encourage the extermination of the destructive and undesirable animals.

Report of the Women's Home Bureau

(JESSIE C. McMILLAN, *Director*)

The work of the Alberta Women's Bureau Branch has followed normal lines during 1929. The work for this year has been almost entirely carried out by courses of three to five days' duration, there being very few single day lectures applied for. Owing to the mild weather, the work was carried on until the latter part of December and found most satisfactory.

During 1929 demonstration lectures and short courses were given to the Women's Institutes, United Farm Women of Alberta, and a few clubs belonging to other organizations.

In some districts the different organizations have formed joint committees to carry on the work, and these committees are proving most helpful.

The following subjects were demonstrated during 1929: Foods and their functions, proper cooking, care and preparation of same, household administration in its various branches, sewing, millinery, basketry and raffia work.

The Department of Health has taken over the teaching of child welfare, home nursing and treatment in emergency.

The arrangements made for carrying on this work are as follows: The Department of Agriculture provides the lecturer or demonstrator and pays her travelling expenses and sustenance allowance. The local organizations undertake to advertise the lecture, demonstration-lecture or short course. They provide the place of meeting and some of the equipment, where equipment is required.

The Alberta Women's Bureau work was carried on throughout the year, the greater part being done during the summer months.

No. of sewing courses given	90
No. of demonstration lectures	0
Total attendance	5,883
Average attendance	27
No. of millinery courses given	20
No. of demonstration lectures	0
Total attendance	892
Average attendance	15
No. of basketry and raffia courses given	75
No. of demonstration lectures	0
Total attendance	6,079
Average attendance	25
No. of foods, household administration, etc.	50
No. of demonstration lectures	8
Total attendance	2,630
Average attendance	20
Total attendance all short courses	15,484
No. single demonstration lectures	19
Total attendance	600
No. of lectures given	18
Total attendance	500
Total attendance at short courses, lectures, and demonstrations.....	16,584
No. of places visited	235

The request for short courses is decidedly on the increase. Great interest is being shown in household administration, cooking and preparing of foods, also in interior decoration.

Sewing and dressmaking courses are always in demand. The courses are arranged for three or five days' duration. This work is found to be practical and helpful.

Several courses in millinery were arranged for and greatly appreciated, also a few courses in flower-making.

The demand for basketry courses is on the increase. These courses usually last from three to five days. Organizations which have already had courses for two years or more are now making larger articles, including pieces of furniture, showing that the interest still remains after the stage of primary work.

A few courses in raffia were arranged for and much enjoyed. In this work there is ample scope for the development of artistic blending of colors and design.

TRAVELLING LIBRARIES AND LOAN COLLECTION.

This section of the branch still continues to retain its interest and is appreciated. Travelling libraries continue to be in great demand, and in the more isolated districts prove a great success.

In the loan collections, the information is kept thoroughly up-to-date from bulletins, special articles and from a supply of magazines. Active interest is displayed in the development of artistic and dramatic art. A varied collection of plays is in constant circulation, also material dealing with handicrafts, arts and crafts and beautifying of the home.

The entire work of the library is planned to create a greater interest in community and individual work.

ALBERTA WOMEN'S BUREAU DISTRICT WORKER.

In August, 1928, a worker was appointed to help the new Canadians in their work in Vegreville district. Several clubs have been formed and lectures given. Classes were arranged where sewing was taught, also canning of fruit, meat and making of pickles.

Everywhere the women and girls are most anxious to learn, though to a great extent they lack interest outside of their own homes. It is found difficult to interest them in any organized effort or carry on with any community work.

In the effort the department is making to assist the women and girls, it is to be hoped that happy and well organized community life will be developed and established.

WOMEN'S IMMIGRATION.

The question of immigration still proves of vital importance to the women of the Province, and one in which they are intensely interested. Letters have been received from the Society for the Overseas Settlement of British Women, advising us regarding newcomers, and also from the Land Settlement Boards advising us about families arriving in this Province.

Every effort is being made to keep in touch with departments, organizations and societies whose work coincides with ours. Information has been given, and also received, on many subjects, thus maintaining communication which is of intense value to all.

Report of the District Agriculturists

REPORT OF DISTRICT AGRICULTURIST, LETHBRIDGE.

(M. L. FRENG)

Generally speaking, the crops for 1929 turned out very good in the Lethbridge district. It is estimated that the Lethbridge division will market some thirty-six million bushels of wheat all of an exceptionally fine quality. Spring opened up in the latter part of March with very little reserve moisture, but April, May and June rains brought more than the usual precipitation, and the crops made very rapid growth. At the end of June the Lethbridge district crop conditions were without a doubt the best on record. However, the remainder of the season continued hot and dry, which considerably lowered the yields, although the yields throughout the Lethbridge district were uniformly good and the quality was average.

The range conditions were ideal throughout the year due to the heavy spring precipitation, and grazing was excellent. In many cases a fair crop of hay could be cut in the foothills.

Due to the favorable good crop yields we have experienced in the last few years the corn acreage has been considerably decreased. However, there is considerable interest in the growing of this crop, and we had some exceptionally good fields of corn throughout the Lethbridge district, but due to the early frost there was not sufficient matured corn this season to warrant our holding the Provincial Corn Show at Lethbridge as anticipated.

Owing to the fact that the majority of the land surrounding Lethbridge comes under irrigation and that the settlers on this project are gradually changing from the one type of grain farming to the diversified type of farming, a great deal of our time is taken up with irrigation problems and working into rotations, coupled with the right class of livestock. Developments along this line are naturally somewhat slow, but there is a very noticeable improvement.

Considerable interest has been shown in the development of farm flocks of sheep, a better type of hogs, and a noticeable increase in dairy cows. This is especially apparent from the livestock shipments out of Lethbridge during the past few years.

In order to assist the rancher and the farmer who wished to get started in sheep, the Lethbridge Exhibition Board sponsored a sheep sale last fall. A good sheep sale of this kind should be held each fall at Lethbridge. At our fall sale last season there were about 4,000 head disposed of, including 150 rams.

The Alberta Department of Agriculture co-operated with the Dominion Experimental Station, and held an irrigation short

course, and a very practical program was outlined, dealing particularly with irrigation problems, proper cropping methods and the management of livestock, especially sheep. There was a good attendance throughout the course, and a request was made by the farmers present that this course be made an annual event.

The Alberta Institute of Co-operation met at Lethbridge during June and held a four-day conference. There were over three hundred paid-up members, who attended throughout the four days. Arrangements were also made whereby juniors, recommended by various organizations, could attend this conference, and the Institute paid their railway fares both to and from Lethbridge and expenses while at this point. A banquet was given by the Alberta Wheat Pool to the members attending.

Our Boys and Girls' Calf Club work is gradually increasing. The sixth competition of the Boys and Girls' Baby Beef Club was held at the summer fair in Lethbridge. There were 22 highly finished animals shown. The first prize went to Edwin Davidson, of Coaldale, and his animal sold to the highest bidder at 40¢ per lb. The total amount realized at the sale was \$3,161.15. These calves are bought from the rancher at weaning time and delivered to the members. The rules and regulations are that there shall be no nurse cows nor any milk feeding. The idea is to make this a commercial feeding operation, and judging from the finish that these boys and girls put on these calves, they compared very favorably with animals shown at the larger fairs who had had nurse cows. The average weight of the calves going on feed was about 400 lbs. Weighed in before the sale these same calves weighed from 800 to 1,050 lbs. This competition has been of great interest in this district.

There is also an Ayrshire and Holstein Dairy Club. In this competition the members commence with a heifer calf and care for it until fair time, when it is shown. A prize list is arranged by the exhibition board, assisted by the Department of Agriculture, but in order to continue further interest in this competition the same animal is shown as a yearling, a two-year-old and later in the milking competition. In this way the member gets practical experience in keeping milking records, etc. There were 65 club animals shown at the Lethbridge fair last year. It was the general opinion that this was one of the best attractions of the fair.

The Better Farm Competition also started last year. There were two competitions, one for the irrigation farmer and the other for the non-irrigation farmer. There was keen competition and a great deal of interest shown.

We also have competitions in the standing crop of both oats and wheat.

Sugar beets are becoming a very important crop in the irrigated district. The officials of the sugar factory are very anxious to further the interest amongst the growers, that is, towards growing higher tonnage of beets, and we considered a good way to do this was to have competitions. There is one competition called the 15-ton club. This is open to any beet grower who grows 15 tons

or better on 5 acres. In connection with this contest I may say that the growers have taken special pains in preparing the ground properly by plowing down sweet clover land, or using alfalfa land, and with the application of barnyard manure, and it has taught the beet grower throughout this area the proper method whereby he can increase his tonnage. The first prize went to W. R. Stevens, of Barnwell, and the highest tonnage delivered to the factory went to Wm. Valgardston, of Taber, who produced 1,400 tons. To further interest in sugar beet growing amongst the juniors in this district, there were six competitions started last year, namely: Raymond, Magrath, Hillspring-Glenwood, Lethbridge-Coaldale, Taber, and the Lethbridge Northern District. This competition was sponsored by the Department of Agriculture, the Sugar Beet Growers' Association and the local growers' association. Awards were as follows:

	Total Points.	Cash Prize.
RAYMOND DISTRICT.		
Beth Christensen	85.02	\$25.00
Bird Mendenhall	84.70	20.00
Smollie Redd	82.96	15.00
Lincoln Wood	82.86	10.00
Ruth Evans	80.80	5.00
MAGRATH DISTRICT.		
Ardith Rasmussen	73.62	25.00
B. Rasmussen	72.88	20.00
Gene Hindley	72.06	15.00
D. H. Bly	69.86	10.00
Bernard Bennion	67.92	5.00
HILLSPRING-GLENWOOD DISTRICT.		
Ada Fisher	71.566	25.00
Dorothy Gibbs	71.338	20.00
Wayne Gibbs	70.250	15.00
Carol Fisher	68.004	10.00
M. Peterson	61.868	5.00
LETHBRIDGE-COALDALE DISTRICT.		
Corny Regher	85.40	25.00
Wm. Schmidt	85.14	20.00
Peter Dick	81.27	15.00
Henry Klassen	71.44	10.00
John Klassen	77.32	5.00
TABER DISTRICT.		
Rowe McMullin	96.88	25.00
Kenneth Williams	94.82	20.00
Donald Anderson	87.20	15.00
Miles Russell	85.26	10.00
Norma Valgardon	74.88	5.00

LETHBRIDGE NORTHERN SUGAR BEET COMPETITION.

Lethbridge Northern Colonization Branch donating prizes. Awards as follows:

Std. Name.	Tonnage.	Cash Prize.
1—Frank LeBar	349.717	Greatest tonnage delivered.....\$100.00
2—J. E. Graham	9.96	Best aver. acre-tonnage on 20 acres.. 100.00
3—T. H. Wyman	12.137	Best aver. acre-tonnage on 15 acres.. 75.00
4—C. Batty	10.40	Best aver. acre-tonnage on 10 acres and less than 15 acres 50.00
5—J. N. Pollock	11.15	Best average on 5 acres 25.00

BOYS AND GIRLS, 16 YEARS AND UNDER, 1-ACRE PLOT.

	Points.	
1—Mary Graham	82.67	Greatest tonnage delivered \$25.00
2—Stanley Lareter	78.76	Next greatest tonnage delivered..... 20.00
3—Tribley Lewis	71.30	Next greatest tonnage delivered..... 15.00
4—Lewis Rogers	71.10	Next greatest tonnage delivered..... 10.00
5—J. Anderson	69.98	Next greatest tonnage delivered..... 7.00

In connection with the junior competition there was also a general competition. This enabled the junior member with the highest score in each district to come in on a general competition, which is sponsored by the Lethbridge Board of Trade donating \$75.00 cash in prizes and the Alberta Department of Agriculture donating one challenge trophy and five medals. These prizes were

presented at a Board of Trade luncheon during February. Awards were as follows:

Name.	Points.	Cash Prize.
Rowe McMullin, Barnwell	96.88	Prov. Dept. of Agriculture Challenge Trophy and .....\$25.00
Corny Regher, Coaldale	85.40	Dept. of Agriculture Medal and..... 20.00
Beth Christensen, Raymond	85.02	Dept. of Agriculture Medal and..... 15.00
Mary Graham, Picture Butte	82.64	Dept. of Agriculture Medal and..... 10.00
Ardith Rasmussen, Magrath	73.62	Dept. of Agriculture Medal and..... 5.00
Ada Fisher, Hillspring	71.56	Dept. of Agriculture Medal and..... 5.00

Co-operating with the poultry pool Mr. Giffen, Assistant District Agriculturist, arranged with the farmers of the Lomond-Retlaw area for a co-operative shipment of turkeys. There was one car of approximately 25,000 lbs. of turkey of exceptionally good quality.

REPORT OF DISTRICT AGRICULTURIST, HANNA.

(E. L. GRAY)

GENERAL CONDITIONS.

In the year 1929 the Hanna district met with one of the most disastrous crop failures in its history. The precipitation during the late fall of 1928 and during the winter was not sufficient to put any reserve moisture in the soil. A heavy snowfall in May gave the crops sufficient moisture to start a fair growth, but continued dry weather throughout the summer months soon destroyed any hope that might have been held for good crop returns. The general average yield of wheat is estimated at $4\frac{1}{2}$ bushels per acre. It is true that some areas in the western section of the district produced as high as 20 bushels on summerfallow ground, but the number of fields totally destroyed brought the average down to the above low figure.

When the failure became apparent during the mid-summer, farmers throughout many sections liquidated a large percentage of their live stock holdings, cattle and hogs being the two classes which suffered most. The feed situation has proven, however, to be not as bad as has been experienced in some former years, most farmers having sufficient coarse feed to bring them through the winter. There is great scarcity of the better class of roughages, green feed, etc., and of food grains. Considerable purchasing of these has been found necessary.

The short crop has caused a serious curtailment of credit, and will have a tendency to reduce the number of acres put in crop during the coming year, farmers being unable to finance any increases.

CROP IMPROVEMENT PROGRAMME.

During the year the crop improvement programme, begun in 1928 from the Hanna agricultural office, was continued. Every effort was made to improve the quality of the seed used in the district, to increase the acreage in grass crops, and to promote better tillage as a means of combatting weeds. Approximately one hundred and fifty men received through the office a total of 3,447

bushels of pure seed of wheat, oats and barley, and 2,520 pounds of grass and clover seed. Out of this distribution there were organized ten combined field crop and clean seed competitions. These were scattered over a very wide territory in order that they might do the maximum of good, extending from Byemoor, north-west of Hanna, to Sibbald, near the Saskatchewan boundary. Three of them were discontinued during the season owing to drought conditions; seven were brought through for bin inspections and will be completed before the 1930 season opens. The quantity of pure seed available from the competitors in these competitions is, even in this dry season, remarkably large.

During the late fall three seed fairs were held throughout the district, at Morrin, Hanna, and Youngstown. Samples from these were sent to the Provincial Seed Fair, and made a very creditable showing, the Provincial Championship being won by Mr. P. J. Rock, of the Morrin district.

LIVE STOCK PROGRAMME.

The greatest progress in live stock work was made with sheep, and it was gratifying to note that this class of stock did not suffer any liquidation caused by feed conditions. The number of small farm flocks has steadily increased in this section of the Province. The most advanced step in the organizing of the growers was brought about in March with the formation of the Eastern Alberta Wool Growers' Association. This organization was formed to make possible a better assembling of co-operative carload wool shipments, the distribution of supplies, and the exchanging, to a limited extent, of breeding stock. Eighty-six growers joined it, shipping approximately 100,000 pounds of wool to the Canadian Co-operative Wool Growers, Limited, at Toronto. An initial payment of from twelve to fifteen cents per pound was made at the loading points. The organization is under a capable board of directors, who are desirous of promoting a healthy growth in the sheep industry of Eastern Alberta.

In general sheep promotion work, the Hanna office organized five boys and girls' clubs, and four breeders' clubs under the Federal Ram Loan scheme. The number of breeding ewes distributed, purchased or exchanged for members of these clubs, or for other farmers, was 1,485. Co-operative shipments of lambs to feeding centres in other provinces and to the Vancouver Live Stock Exchange were encouraged, a total of 1,700 head being shipped in this manner.

Assistance given to the cattle, horse and swine industries has been of a general nature, being largely aid in securing and exchanging breeding stock for interested farmers. One stallion club organization was maintained among the farmers in the Oyen district.

Interest in the poultry industry has steadily increased. The better class of farmer has come to realize that a farm flock of good producing birds is one of the best forms of insurance against lack of living expenses in the dry years. Many are also adding an

increased number of breeding turkeys to their holdings, although the extremely low prices for turkeys during the year has been rather discouraging. Assistance to the industry has taken the form of the securing of baby chicks and hatching eggs, the exchanging and securing of breeding stock, flock culling, and aid in marketing.

GENERAL PROGRAMME.

A general programme of agricultural education and assistance has been carried on throughout the entire year. Forty meetings were held at various points, with an average attendance of forty-two people: lectures were given, or education films were shown, at all of these. Four successful small fairs were held at the following points: Oyen, Youngstown, Delia, and Munson. School fairs were attended at Byemoor and Hanna.

Special efforts were made to increase the interest of the people in farm planning and beautification. Aid was given in the securing of stock for shelter belts. Surveys were made of various farmsteads, and plans for their improvement were obtained from the Town Planning Department in Edmonton.

During the latter part of the season farmers requested considerable assistance from the office in securing the better grades of feed, of which the district was short. From the office there were distributed up to the close of the year eight carloads of feed grains, sixteen carloads of select hay, principally alfalfa, and two carloads of feeding molasses from the Canadian Sugar Company at Raymond, Alberta.

REPORT OF DISTRICT AGRICULTURIST, GRANDE PRAIRIE.

(A. R. JUDSON)

SEASON.

A considerable period of mild weather during the month of March took the snow off in the Grande Prairie district, and left almost no frost in the ground. As a consequence, the dry fall plowing absorbed all the moisture from later storms, which was sufficient to put it in good shape for seeding. Work on the land commenced during the third week of April. On account of the large amount of prepared land, little spring plowing was necessary; rapid progress was made, resulting in 75% of the wheat crop being in by May 3rd. Oats and other coarse grains were sown in good season. These completed the largest acreage in the history of the Peace River District.

In spite of the adverse conditions under which the fall plowing was done, thanks to the more favorable moisture conditions noted above, practically all the grain went into a good seed bed. Germination was good and the stand the best in several years.

Wireworms, in the older crop areas, again took their toll, leaving ragged stands on some farms, while only thinning other fields.

While the loss from this pest is not a big factor as far as the crop as a whole is concerned, it is severe in some of the older districts and a matter of first consequence on a number of farms. It promises to be a major problem, in so far as this area is concerned, and there is a need for information that can only be obtained from further research work, for which adequate provision should be made without delay.

The crop over the whole area developed nicely until late June when lack of moisture, particularly on fall plowed land, became quite apparent to the west of Grande Prairie, south of Bear Lake; in the Lake Saskatoon district, the Spirit River district, and the Waterhole area. In these sections the yield varied from rather light to that of an average crop. The remaining area, comprising much the greater part of the Peace River, threshed a crop considerably above the average.

Although some of the better oat stands were heavy and a little late, the crop was down in good time. Threshing, favored with good weather, proceeded rapidly, and resulted in a good quality of grain, exhibits from which were made at Toronto, Chicago and Calgary. At Toronto Mr. W. D. Albright won second place with Reward wheat and Mr. Robert Cochrane fourth with Victory oats. At Chicago Mr. P. U. Clubine won first place in the class for small yellow peas; Mr. Albright and Mr. G. W. Randall, of High Prairie, were in the wheat money, and Mr. Cochrane among the prize-winners in oats.

Largely due to a September snowstorm, which in one week yielded over 5 inches of precipitation, the season closed with an ample supply of moisture stored for the coming year. A heavy acreage of fall plowing was done under the very best of conditions. New settlement, together with the increased use of the tractor in all areas, has resulted in not less than 100,000 acres of new land being brought under the plow during the year. One bank estimate stands at 120,000 acres.

NEW SETTLEMENT.

Considerable settlement has taken place between High Prairie and Sturgeon Lake; south of Sturgeon Lake and between the Lake and De Bolt. There has been a very marked increase in the settled area in the McLennan-Falher-Girouxville section. New areas west of Spirit River and east of Rolla have filled in, and many have been added to the western section of the Grande Prairie district. Sunset Prairie, Fort St. John and adjacent areas in the B.C. Block have been greatly enlarged.

In the Alberta area north of the Peace there has been much development in the Hines Creek district and other sections lying to the northwest of Fairview, where soil survey work has resulted in the mapping of considerable good land. The Battle River area now comprises a settlement of twelve to fifteen hundred people. A number of homesteads have been filed on in the Keg River district, some ninety miles beyond the heart of the Battle River, but only

five are as yet in residence. An increased number have filed in the Fort Vermilion territory.

The visit of the Associated Chambers of Commerce and of other parties during the year has given the North considerable further publicity. Much of this has been valuable, but it is also a fact that it has served to add further to the problems of the Province. The movement to these areas, which consists largely of homesteaders, has been greatly increased as a result of the publicity given to these visits. The tendency is to push on to new open areas regardless of distance. Unless checked this will, immediately spring opens, result in the rapid filling up of areas far removed from railways, roads and other facilities. To say the least, it will require expenditure for roads and other services that should not be, and perhaps cannot be, undertaken for some time. It may mean much hardship for an extended period for many people, hardship which is not at all necessary. A carefully regulated settlement scheme is sorely needed.

BETTER SEED.

Through the Peace River Co-operative Seed Growers, Limited, organized last year, valuable work has been done in distributing good seed stocks, particularly oats. As a result of this work a considerable proportion of the oats now available for shipment are closely descended from registered and can be quoted on a variety basis. These stocks are being well distributed throughout the area, and another year should see a further marked improvement in this respect. Banner and Victory are the two standard varieties, with the latter much in the lead.

Some registered Marquis has been distributed in areas to which it is suited, but the main demand is for an earlier maturing wheat. Garnet has yielded well and, in spite of the grade discrimination against it, is a popular farmers' wheat. Reward, on account of its quality and stiff straw, is gaining ground, but loose smut infection, in that obtained from some particular sources, has been a handicap. It is not as early as Garnet and not quite as good a yielder. Red Bobs 222 and Early Triumph have been yielding particularly well on some of the heavier soils, and as a consequence are in favor there. Two ears of Red Bobs 222 graded No. 1 hard this year.

Approximately 500 bushels of Kharkov 22 were shipped in last season. Practically all fields came through the winter in fairly satisfactory shape, and yielded well for the season. There is, however, not the same advantage in earliness as in the southern part of the Province, the majority of the fields only being a few days ahead of Garnet. On account of threshing being rather late for seeding again this season, most of the farmers are holding their wheat over until next year.

The introduction of some registered stocks of Arctic Sweet Clover is helping in the spread of this legume. Difficulty in securing seed free of noxious weeds has hampered its development in past years. The increased call for nitroculture has indicated a decided increase in acreage this season.

A keener interest than ever before is being taken in the weed problem; more and more, farmers are coming to realize what weeds mean. Some good work has been done in this connection, but much remains to be done. A number of small patches of Perennial Sow Thistle have been located by the supervisor this season. The old patches are being held under control, but are not being eradicated. This should be done by the use of chemicals or otherwise. Wild oats have shown up in the older districts more than in any previous year. The introduction of better seed, the more general use of cleaning machinery and the influence of settlers coming from weed infested areas, together with the educational work of the department and the municipalities, are all helping the situation.

FERTILIZER EXPERIMENTS.

Tests, with superphosphate as a fertilizer, were arranged on six farms with the assistance of Mr. W. D. Albright. Owing to the late arrival of the drill only two could be sown to wheat, the other four being carried out with oats. More extensive tests were undertaken on the Experimental Station under the supervision of Mr. Albright. In all, some fifty acres were sown with fertilizer and a like area in check plots. The drilling was done by Mr. George Ingram.

These tests indicated that the fertilizer might be of assistance as a weed check when drilled, and under some conditions quality and yield might be improved as well as maturity hastened. Very much more extensive tests will be necessary before its economic value can be determined.

LIVESTOCK.

There has been some small increase in livestock holdings during the year. Some areas added a few milch cows. Many more could be placed, particularly in the Falher area, were they available at a more reasonable price. A few more have started with sheep. Hogs have increased to some extent in the more outlying districts. Beef bulls are more in demand, and efforts are being made to have suitable bulls brought in. Three of the five horse clubs originally organized operated again this season. The increased use of tractors, however, is resulting in a lessened interest in horses.

While wheat and seed oats are, and should remain for some time, the main cash crops, livestock should, and must, occupy a larger place on most farms than it now does. Efforts are being made toward this end. With lower grain prices in the offing the small farmer particularly must have other sources of income. He cannot hope to cut his costs sufficiently to be able to compete successfully as a straight grain grower.

POULTRY.

There is a growing interest in poultry; many are inquiring regarding suitable breeding stock and proper housing. It is an opportune time to direct development along the right lines.

The turkey marketing work was this year carried on by the Grande Prairie Co-operative Poultry Producers, Limited, organized last season. Some assistance was given in completing necessary arrangements. Two cars were shipped through the Pool, one to Toronto and the other to Montreal.

MISCELLANEOUS.

In addition to some individual meetings a series of twelve meetings in connection with the better seed campaign was carried out with the co-operation of Mr. Albright. Four Combined Seed Crops and Cleaned Seed competitions were organized, and will be completed in the later winter.

REPORT OF DISTRICT AGRICULTURIST, MEDICINE HAT.

(JAMES MURRAY)

The year just passed was much less favorable for crop production than either 1927 or 1928, but in this part of the Province the returns were better than in many districts. The average yield was little over ten bushels per acre, but the wheat graded high and the price was reasonably good, so that the final returns were fairly satisfactory.

Moisture conditions were so favorable following seeding that an excellent stand of all grain was secured regardless of how the land had been prepared. Rains were sufficient to carry all crops through June in a thriving condition, but after the first week of July there was no further precipitation until harvest, the temperatures were very high for several weeks, hot winds were frequent, and severe damage to the crop was inevitable. The reserve of moisture in land which had been summerfallowed was sufficient to produce a fair growth of straw, but in some districts not properly to fill the grain, and it graded down in consequence. The crop grown on spring plowed land was lighter in straw, but in many cases was of better quality.

The warm, dry weather continued through August and September, so that harvest and threshing were carried on without interruption and finished much earlier than usual. Combined harvesters helped materially in getting the grain quickly out of the straw, and trucks moved it rapidly to market.

In the north-eastern part of the district the crop was lighter than in the Cypress Hills and toward Foremost, but it was of good quality and graded mainly No. 1 and No. 2 northern, with a limited amount of No. 1 hard.

GRAIN IMPROVEMENT.

As cereals are the source of the greater part of the revenue from the farms in this part of the Province, considerable time has been given to the improvement of the quality of the crop. There has been in recent years too great a tendency to try out new varieties

of grain regardless of whether they were of desirable quality. An effort has been made to counteract this by directing attention to those varieties which have proven most satisfactory by interesting good farmers in the growing of registered seed for distribution in their districts, and by assisting in the disposal of the seed when produced.

During the year considerably more registered grain has been produced in this part of the Province than ever before, and most of it has been disposed of for seed in the neighborhoods where it was grown. In addition considerable quantities have been shipped in from other districts in Alberta and from Saskatchewan.

To assist further in creating an interest in growing seed several field crop competitions have been held. The product of the fields in the competitions will help raise the general standard of the commercial grain produced.

Two seed fairs have been held during the past year, one at Bindloss under the auspices of the Bindloss and District Farmers' Club, and the other at Medicine Hat sponsored by the Medicine Hat Kiwanis Club. The Bindloss fair was small, as most of the exhibits were from the immediate district where the hot dry weather had reduced the yield and injured the quality, but considering the season the products shown were creditable. At the Medicine Hat fair there were over 100 exhibits, about half of which was Marquis wheat of excellent quality. This is the second year that this fair has been held, and in that time it has been instrumental in stimulating an interest in good seed. The fair has been well supported by the milling companies and other business concerns, and the Kiwanis Club is to be commended for the excellent work that it is doing.

FEED CROPS.

The comparatively good years with ample feed for all classes of stock have served to draw attention away from forage crops toward cereals. It is still, however, very important that information be accumulated as to the suitability of various forage crops and the best means of growing them.

There has not been any stampede into the growing of grasses and clovers, but there is a steady increase in acreage. Many farmers are sowing a limited acreage of brome grass and sweet clover, mainly for pasture, but also for hay. The alfalfa acreage is also increasing slowly but steadily. Each year the acreage in this crop on the river flats is increased as the pumping plants increase in number and capacity.

Corn was not extensively grown in this locality this year, but there were a number of farmers who grew from twenty to forty acres, and many more had a few acres. The extremely hot dry weather in July and August injuriously affected the growth of this crop, as it did all others, and the severe frost on September 6th interfered with its ripening. Fortunately, however, several men who have been making a business of growing seed were able to ripen sufficient to keep seed of the strains that they have been developing and growing for a number of years.

A number of the better early varieties are still being tried out with farmers in different parts of the district, particularly where they have not previously been commonly grown. In this way the crop is being introduced each year to new growers, who are using it for fodder in various ways.

FERTILIZER EXPERIMENTS.

At the request of the Field Crops Commissioner arrangements were made with several farmers to carry on experiments with superphosphate as a fertilizer with wheat. Two farmers near Whitla undertook to do the work under supervision and did their part satisfactorily. Full reports were forwarded at the conclusion of threshing.

LIVESTOCK.

On the farms here livestock do not occupy as important a place as in some other parts of the Province. Horse breeding is of less interest, and is carried on with less profit than before the advent of the tractor. Cattle and hogs are holding their own in numbers, although there are fewer cows being milked than a few years ago. Sheep are getting more attention, and a few flocks are being added each year, mainly as an adjunct to grain growing. During the year assistance has been given in securing breeding stock of all classes of stock, a service which was appreciated by many farmers.

POULTRY.

There is an increasing interest in poultry—in the improvement of the breeding flock, in the housing and in the care and management. It has been possible to give some help to those interested in procuring good breeding stock, and in disposing of the surplus both for breeding and commercial purposes; and to advise regarding care and management and housing. During the fall a number of flocks were culled with the assistance in a number of districts of E. R. Nicholls, of the Poultry Branch. There is still room for considerable development and improvement in the poultry business.

FARMSTEAD PLANNING.

In co-operation with the Director of Town Planning a number of farmsteads have been planned and mapped. The beautification of farm homes is carried on with greater difficulty in this part of the country than in those districts with a heavier rainfall, but many pioneers in tree-growing have shown what may be accomplished, and others in their neighborhoods are now encouraged to follow suit. Tree growth is slow here compared with many parts of the prairie, but when the land is properly prepared the majority of those who plant trees are agreeably surprised how quickly small saplings make a showing as a shelter belt. At best it takes a number of years to make a farmstead on the open prairie an attractive place—it has to develop. The object of the service instituted by the Director of Town Planning is to have this development proceed along definite approved lines.

MEETINGS AND SHORT COURSES.

A two-day short course was held in connection with the seed fair at Bindloss in November. The outside speakers were Prof. J. Macgregor Smith, University of Alberta; E. L. Gray, Hanna; E. R. Nicholls, Poultry Branch. Four meetings were held, two in the afternoon and two in the evening with an average attendance of eighty. A number of single meetings were held at other points during the year, for the most part under the auspices of U.F.A. locals or locals of the Wheat Pool.

REPORT OF DISTRICT AGRICULTURIST, VEGREVILLE.

(F. H. NEWCOMBE)

SEASON.

The district served by this office harvested this year the poorest crop since the opening of the office, with the exception of the district immediately tributary to the Lloydminster-Willingdon line of the Canadian Pacific Railway. In that district a rather generous rainfall was received, and the average yield was at least normal. Over the balance of this territory, however, yields were low, wheat averaging about eleven bushels per acre, oats twenty-four and barley fifteen bushels per acre.

There was very little carry-over of moisture from the previous season, though sufficient to germinate the seed, and with warm weather, growth was quite rapid. There was absolutely no rainfall after July 12th. The extreme dry fall permitted of saving the short crop to the best advantage, though several different machines were used for that purpose. In the fall of 1929 the land was so dry that practically no fall plowing was done, and summerfallow were almost valueless from the standpoint of weed control.

The quality of grain harvested was decidedly the best since 1923. The feed supply, while considerably below normal, will probably be sufficient, though there may be a few cases in which it will be necessary to import feed.

FIELD CROPS.

Seasons, such as have just been experienced, have a tendency to somewhat reduce the percentage of the acreage seeded to wheat. There is evidently in this district a tendency towards the production of more coarse grains and grasses. Marquis wheat still leads in popularity, though considerable Garnet, University 222 and Reward are runners-up in the order given. The northern part of the territory formerly given over to Preston, Blue Stem and other early but poor milling varieties, is now turning to Marquis and other standard varieties, and a part of the credit for this is probably due to this office. Considerable individual effort has been directed towards this line. The acreage being sown to grass and fodder crops is increasing gradually but steadily. Sweet Clover, Western Rye and Brome are the favorite varieties of grass, and considerable

quantities of these seeds have been ordered through this office. Previous seedlings proving satisfactory are inducement to further growth. Original areas seeded to tame grass have been small, but sufficient to prove the advantages over wild hay and pasture. This phase of the work is receiving considerable encouragement from this office looking to the prevention of soil drifting, control of weeds and maintenance of fertility.

WEEDS.

The weed problem is, of course, inseparably linked with the profitable production of grain. It is safe to say that in this district noxious weeds are decidedly on the increase and, while wild oats, stink weed and mustard predominate, there is also some sow thistle and Canada thistle. Some farms in this district have already reached the stage where they cannot be made to produce wheat profitably. Lack of rainfall during the past season will be an important contributing factor to the weed growth in next year's crop, and we may expect to see considerable increase in the prevalence of the annual weeds particularly.

The tendency towards power farming, we think, will not assist in weed control, and this office has always maintained that efficient cultivation and weed control is inseparable from a diversified system of farming. The lack of proper seed cleaning machines is an important phase of the subject, and it is hoped that before another season has passed it will be possible to do something in a community way to meet this problem. In the past farmers have depended for their seed grain on the crop from new breaking, but this will not be possible in the future, since a very small proportion of the land remains to be broken.

SWINE CLUBS.

The partially frozen crop of 1928 provided plenty of feed for hogs, with the result that very few farmers desired to sell weanling pigs in the spring of 1929. This had its effect on swine clubs in making it difficult for us to secure young pigs of the right type. No new clubs were organized, but the clubs at Vegreville, Mundare and Willingdon were carried on. The Vegreville Club is experiencing some decline in enthusiasm, which is usual after five or six years of operation. A local competition was held and a car-lot marketed, but no team of boys was taken to the Edmonton competition. The Vegreville car-lot was placed fourth in Edmonton.

Mundare is possibly the largest swine club in the Province, though only two years old, and is expanding rapidly. The quality of pigs was not quite so high as last year, though already the club is having its effect on the general quality of hogs being shipped from the district. At Willingdon enthusiasm was strong, and probably five car-lots of pigs were marketed by the members at various times during the season. The team of boys from the Mundare and Willingdon clubs made a very creditable showing at the annual Swine Club Competitions in Edmonton, and a team of girls from Mundare also gave a very good account of themselves.

There remains new territory to be organized in swine club work throughout this district, and attention will be directed to this as soon as conditions are favorable.

The Sire Loan policy of the Dominion Live Stock Branch has always been popular in this district, and at the present time some thirty boars are on loan under the policy. Since the restriction of this work to swine clubs, Yorkshire boars only are being placed.

The effect of the short crop is also seen in the interest in swine raising generally throughout the district this fall. It is our opinion that fewer sows will be bred this fall than in any season since the opening of this office. However, this is accompanied by a proportionate demand for quality.

DAIRYING.

The importation of Ayrshire and other high-class dairy cattle, during the past two or three years, has done much to stimulate interest in dairying in this district, and the demand for cows of good dairy breeding is increasing. A little more work, however, will be required to demonstrate to many of the farmers the outstanding advantages of high-producing cows. This office has, however, given assistance in the purchase of cattle at various dispersal sales throughout the Province, one of the principal difficulties in this regard being the difficulty of a suitable supply of good cows. Eight Shorthorn heifers were placed in the Mundare district early in the spring, and it is hoped that, after a few more have been introduced which are now requested, it will be possible to form a Dairy Heifer Club at this point. This class of work, while necessarily slow, is productive of very good results.

Dairying as a branch of the farm business is decidedly on the increase in this district, as evidenced by the very decided increase in the make of the creameries at this point. The improvement in the quality of dairy cattle is also attested by the fact that the winter's make particularly shows increase.

POULTRY.

Poultry work has been quite an important project during the last three years. During the breeding season particularly it is the aim of this office to give as much supervision as possible to those who are brooding chicks, particularly those entering the work for the first time. As a result of this we are able to substantially reduce the mortality of baby chicks. Up to the present also we have assumed the responsibility of selecting the breeding flocks for the poultry men in the district.

This year special attention was given to the marketing of dressed poultry. A shipment of birds was made from Vegreville to Edmonton by truck, where the birds were killed at the pool plant and afterwards sold by the Poultry Pool. Organized killing demonstrations were also conducted at Vegreville, Andrew, Willingdon, Hairy Hill, Two Hills, Lavoy and Ranfurly preparatory to the community shipment of dressed poultry and dressed turkeys which was made at a later date. The rather low schedule of prices was somewhat

discouraging, but on the whole this work may be said to have been satisfactory. For the first time organized marketing was attempted under our supervision, and in co-operation with the Alberta Poultry Pool some 90,000 pounds of dressed turkeys, chicken, ducks and geese were marketed co-operatively from this district, and it seems probable that next year will see this method more generally patronized. One outstanding advantage of this policy seems to be the demonstration of the advantage of proper feeding, finishing and dressing. The low price of turkeys this year may react against increase in this crop next year, but there is a decided tendency towards the introduction of better stock. The fact that the district is gaining some prominence as a poultry centre is plainly evidenced by the requests received at this office from other parts of the Province for breeding stock. The work of this office in future in regard to poultry must necessarily be along the line of improved quality. Seasons such as we have just passed through demonstrate conclusively to the farmer the advantage of the steady weekly, if somewhat small, returns to be made from poultry, and it is quite apparent that the merchants also recognize the improved buying power of those farmers who have an egg cheque every week.

SHEEP.

Due partly, of course, to market prices, but also having consideration to the foundation work done by this office in this project, sheep promotion work is meeting with satisfactory response. Assistance has been given in the establishment of eight small flocks in addition to breeding stock which was secured for those already in the business. The weed problem may also be cited as one of the reasons for the popularity of sheep, and as the sheep population of the district increases farmers are adapting their cropping systems to the use of the sheep as weed destroyers. Arrangements are under way for demonstration next spring of the advantage of dipping and castration, and docking will also receive attention. We have not thought it advisable to press the sheep business too fast, and we hope thus to avoid disappointment should the market break to some extent.

The Sire Loan policy of the Dominion Livestock Branch is also patronized in connection with sheep, and twenty rams are now out under this policy in this district.

SCHOOL FAIRS.

The only fairs in this district which come directly under our supervision are those at Vegreville and Mundare, and it is safe to say that these two fairs are of very high quality. Considerable time is spent in the spring in organizing and preparatory work and throughout the summer in supervision, particularly of the livestock products. It is our endeavor to use the school fair, not only to interest the children in the various projects, but also as a means of beginning some more ambitious programmes later.

LECTURES AND SHORT COURSES.

A very successful agricultural short course was organized and held at Mundare, March 18th to 21st. The very large attendance during the entire course is, perhaps, the best evidence of the appreciation of the people for this service. The farmers showed a keen interest in all the sessions, and a ready acceptance of the opportunity to discuss their various problems with the lecturers.

Approximately fifty public meetings were organized and attended by representatives of this office when subjects of agricultural interest were discussed. We have found these individual meetings of great value as a foundation on which to build future definite promotion projects.

REPORT OF DISTRICT AGRICULTURIST, SEDGEWICK.

(H. W. Scott)

GENERAL CONDITIONS.

The fall of 1928 was dry, and very little snow fell until well on in February. The light snowfall made it possible to get on the land quickly once the season opened, and as there were no interruptions on account of unsettled weather, seeding was completed a little earlier than usual. Generally speaking, germination was uniform and rapid. An added interest in good seed and legume culture was noted following the agricultural short courses, of four days each, at Hardisty and Sedgewick. High winds prevailed all spring and early summer, causing soil to drift that had never been known to drift before. The rains did not come, and conditions became more serious as the season advanced. Good summerfallow fields stood up for a time, but even these finally were robbed of all moisture, pastures were burned up and many shallow wells went dry. Towards harvest time the problem of getting what little grain there was became acute. Various methods of making headers out of binders were adopted, and fields that promised a few bushels per acre were harvested by methods planned to save as much of the grain as possible. Earlier in the season many seeded acres were ploughed down, and livestock was turned on to pasture a still further acreage. The threshing was a light task, and easily done by farmers in the district, without any outside help. Two bushels per acre on the seeded area would be about the average yield for a very large part of my district. It was certainly a disappointing year.

Livestock was culled rigidly, and only a few of the best cattle, sheep and hogs were retained. The "Free Freight" policy was taken advantage of, and representatives of the municipal councils located hay, oats and barley early. Straw stacks that have been accumulating for years are being fed, but the situation even yet is not bright. Potatoes and garden stuff have had to be brought into the district, and ready cash for purchasing food for man and feed for livestock is scarce. In spite of the unfavorable climatic conditions, considerable general progress has been made during the year.

JUNIORS AND CLUB WORK.

School Fairs.—Nine school fair centres embracing 86 schools and 2,107 pupils were engaged in this work, and made in all 7,437 entries at the fairs. The scholarship winners, who will take the short course of one week at the Vermilion School of Agriculture in 1930, are:

Amisk—Fred Eeles and Myrtle Burpee.
Camrose—Ralph Tanner and Ruby Roose.
Czar—James Whitelock and Irene Clouston.
Hardisty—Francis Kobitzsch and Margaret Campbell.
Provost—Roger Fleming and Phyllis Trigg.
Sedgewick—Oswald Olsen and Edna Simpson.
Treaty Hill—Norman Wold and Eunice Cameron.
Wavy Lake—Frank Demskie and Helen Hodam.

A marked increase in the number of entries of livestock, other than pigs, was noted this year at all the school fairs. The attendance of parents and visitors was gratifying. The keenness of the competition in the majority of classes showed the interest taken by the young people in the school fair work.

Public-speaking contests were conducted by seven of the school fair associations, and this year we had 98 contestants. There are two events: one for junior, which takes in pupils up to and including Grade VII; and another for seniors, which includes those in Grade VIII and the high school. Three medals are offered in each event. Mr. E. A. Corbett, director of extension, University of Alberta, attended all these contests, acting as one of the judges, and in the evening he furnished a programme, for which a charge was made, and in this way the associations raised money to pay for the medals.

Swine Club.—Shortage of feed and pasture in the summer and fall, caused an uneven marketing of swine club hogs. The carload that was exhibited in the Provincial competition contained 30 selects, 22 bacon and 8 butchers. This load stood second in the competition. The judging team from Sedgewick stood third and the team from Hardisty club stood sixth, with 21 teams entered in this competition. In the Canadian Pacific Railway competition Hardisty club worked into second place.

Farm Boys' Camp.—Camrose exhibition association asked me to take charge of the Farm Boys' Camp again this year. The association supplied the boys with a tent for sleeping, meals for the days of the fair, passes to the grounds and grandstand, and \$50 in prize money. Boys 16-18 years of age, 15 in all, who had in 1925 stood high in the school fair work, were selected. Demonstrations in judging of different classes of livestock were conducted first, then the boys followed with keen interest the judging of the regular classes at the fair, turning in their placings on a large number of the classes.

Dairy Convention Competition.—Five teams from the Sedgewick and Alliance districts attended the Dairymen's Convention at Edmonton, and entered the boys and girls' judging and demonstration competitions. In judging they stood 2nd, 4th, 6th, 8th and 9th, and in the demonstration competition they stood 1st, 2nd, 4th, 5th

and 6th. These competitions widen the horizon of the boys and girls taking part. They learn a good deal about the composition of feeds, about the proper mixtures to use for different purposes, and about desirable type in dairy cattle.

Junior U.F.A.—The Rosyth Junior U.F.A., one of the largest in the Province, undertook to hold a Standing Field Grain Competition in 1929. Eleven members secured enough good seed to sow at least 10 acres. Considerable interest and enthusiasm was evidenced, but owing to the extremely dry weather it was decided not to have the fields judged, as the crop was very light.

The central committee of the Co-operative Institute asked me to see that each junior local in this part of the Province was represented at one of the institutes. This task entailed more work than was at first anticipated, but we were able finally to arrange full representation. These young people who attended the institute received valuable information and inspiration along the lines of co-operation.

Lamb Clubs.—Had there been more feed available, and more ready cash from the 1929 crop, there would have been a marked increase in the number of small farm flocks of sheep. A nice start has been made, and the district, through the Sire Loan policy of the Dominion Live Stock Branch, has now 8 very fine Hampshire rams in service in the boys and girls' lamb clubs. We expect that this is but the beginning of an extensive move in the direction of lamb clubs.

POULTRY.

The interest in good poultry, well fed and comfortably housed, is increasing, and this year there are a good many farmers who have taken in more money from the sale of eggs and dressed birds than they have from grain crops. These birds have helped to tide their owners over a critical period. A large incubator, installed by the Farmers' Co-operative store at Killam, hatched eggs almost entirely for its store patrons. Over 40,000 pounds of dressed and live poultry have been shipped from Killam alone in 1929. One large community kill, held in the curling rink, furnished practically a full carload of dressed birds which, through the Provincial Poultry Pool, found a splendid market in the east. There is a strong probability that an Accredited Flocks Association may be organized at Killam to supply choice Buff Orpington breeding stock to this district.

In the district surrounding Hardisty, an Accredited Flocks Association was organized to breed White Plymouth Rocks. Some 3,000 baby chicks were secured from one of the outstanding White Rock breeders on the continent. While it was a little late in the season before they were delivered, these chicks have grown into beautiful birds. The surplus cockerels were crate-fattened, and at just over the six months they dressed from 6 to 7 pounds, and over half of them graded milk fed A's. This we believe an exceptional record, when we consider that this was the first time any of these farmers attempted to market high-class dressed birds. An Accredited Flocks Association at Daysland continues to breed high-

class birds. They have a private market for their commercial eggs, and supply quite a volume of eggs for hatching.

Poultry as a side-line has grown, on some farms, to the place where from 400 to 500 laying hens are maintained. The success of the members in the Accredited Flocks Associations is leading others to take interest in the farm flock.

MISCELLANEOUS.

This office is called upon to give assistance and advice in many activities. The agricultural society, while it did not hold an agricultural fair, did have a seed fair, a combined standing field grain and clean seed competition, a good farms competition, assisted in conducting a short course in agriculture, which lasted four days; organized a ploughing match, which eventually had to be cancelled because the ground was too dry to plough; gathered and exhibited a district exhibit at the Calgary and Edmonton exhibitions. The co-operative creamery is filling a useful purpose in the district, and giving real service. It has again been able to pay a bonus of 2c on all butterfat delivered in 1929. The Rural Credit Society is gaining in members and strength. Twelve co-operators were engaged in conducting superphosphate experiments during the year. The placing of new settlers and farm hands in the spring, and later the attempt to locate work elsewhere, took some attention.

Altogether, while the climatic conditions have not been favorable, we feel that real progress has been made along many lines, and the real spirit of co-operation which is evidenced speaks well for future progress.

REPORT OF THE SCHOOL OF AGRICULTURE, CLARESHOLM.

(S. H. GANDIER, *Principal*)

GENERAL PROGRESS.

The work of the past year was carried out under policies similar to those followed for the last several years at this school, and in several departments definite progress was made, as is indicated in succeeding sections of this report. In some respects our efforts have not been rewarded with results equal to those reported in some former years. Under this head the matter of registration in the regular courses is causing some concern. On the whole, however, the year 1929 has been a fairly successful one insofar as class instruction, farm operations, plot experiments and the various branches of extension work are concerned. The Claresholm district was one of the few areas of the Province to be specially favored with a normal growing season, a fair supply of moisture and excellent harvest weather. As a result, the field and plot experiments at the school were carried to a successful conclusion. Crops on the school farm were above average in quantity and quality, and the crops of the district, especially wheat, were quite beyond earlier expectations. Wheat in the Claresholm district ranged from 20 bushels on stubble to as high as 50 bushels on summerfallow, and 75% of the crop graded Nos. 1 and 2.

TEACHING STAFF.

No resignations from the staff occurred during the year, the personnel of the staff of instruction being as follows:

Permanent Staff.—Principal and Instructor in Science, S. H. Gandier, B.S.A., Instructor in English and Mathematics; School Fair Organizer, W. S. Benn; Farm Manager and Instructor in Animal Husbandry, W. J. Harper, B.S.A.; Agronomist and Instructor in Field Husbandry, W. Robinson, B.S.A., M.Sc.; Instructress in Cooking, Miss F. C. MacIntyre; Instructress in Sewing, Miss G. M. Pokotilo.

Temporary Staff.—Instructor in Veterinary Science, C. E. Buchanan, V.S.; Instructor in Mechanics, W. S. Scarth, B.S.A.; Instructor in Science and Beekeeping, S. O. Hillerud, B.S.A.; Instructor in Dairying, A. N. Macdonald; Instructor in Irrigation, C. Giffen; Instructress in Home Nursing, Miss H. E. Gerry, R.N. Those included as temporary staff are engaged by the department for the period of the school term only.

ENROLMENT.

During the winter term from April to March the total enrolment in all classes was 78 students. Contrary to expectations, the enrolment at the commencement of the fall term was less than for several years previous, there being 61 registrations apportioned as follows: First Year Agriculture 16, Second Year Agriculture 18, First Year Home Economics 15, Second Year Home Economics 11, Special in Horticulture 1. Many inquiries regarding the courses offered had been received during the summer and fall, good crops prevailed in the immediate district, and local interest in the school had been awakened through the rumors that the Claresholm and Raymond schools might be amalgamated at some other point at a future date. It was hoped that these factors might contribute toward an increase in attendance, and the reduction in numbers at our fall registration was a distinct disappointment. A number of factors seem to be working to the detriment of the attendance at Claresholm, the most outstanding being the lack of dormitory equipment such as has recently been added to some of the other schools of agriculture. Our canvass for students, especially in our more northerly districts, reveals that numbers of prospective students prefer to attend the larger schools where more extensive equipment, including dormitories and gymnasium, are decided attractions which Claresholm cannot offer.

AWARD OF DIPLOMAS.

At the closing exercises on March 28th, thirty-one diplomas were presented to the graduates in Agriculture and Home Economics by Mr. H. A. Craig, Deputy Minister of Agriculture, and Mr. E. A. Corbett, head of the Extension Department of the University of Alberta, as follows:

Diploma in Home Economics.—Delila Anderson, Frankburg; Nora A. Blackburn, Banff; Ella Barlow, Barons; Cecile Barre, Claresholm; Iona Dalton, Dalemead; Eda Frank, Frankburg; Irene Gruenwald, Warner; Alma M. Malin, Vauxhall; Gertrude Northeott, Lake McGregor; Irene O'Neill, Lethbridge; Harriet Pedersen, Dalemead; Lydia Roberts, Blackie; Jennie Ulfsten, Champion; Ethel Webb, Pincher Creek; Mary C. Wood, De Winton.

Diploma in Agriculture.—Clarence H. Andrews, Vulcan; Geoffrey Barnett, Rinard; John Bushell, Milo; John Eaglesham, Cayley; Herbert M. Harriman, Claresholm; George W. Howden, Kersey; William E. King, Birmingham, England; Lawrence B. Kirkhoff, Taber; Emmet S. Matson, Claresholm; R. Marshall Ness, De Winton; Fred A. Noyes, Reid Hill; Clifford L. Oviatt, Stavely; H. Clifford Pierson, Taber; Reginald Purdy, Macleod; Stanley K. Strang, Claresholm; Thomas Thompson, Stavely.

PRESENTATION OF MEDALS, PRIZES, SCHOLARSHIPS.

At our closing exercises in March the award of all prizes, medals and scholarships for the work of the school term was announced and presentations made.

STUDENTS' HEALTH.

The work of the winter term was handicapped considerably through the prevalence of epidemics of measles, scarlet fever,

mumps and influenza, amongst the students and in the town of Claresholm. For some weeks classes were at only two-thirds strength, many of the students being in a quarantine and under the doctor's care. Only one case of a serious nature developed, and I regret to report the death of Glen Swarbrick, a second year student from Okotoks, from pneumonia following measles, which occurred in February.

STUDENT ORGANIZATIONS.

The Student Council, Literary Association, and Athletic Association functioned efficiently as usual in taking care of all student activities. We are especially fortunate at this school to have staff members who are gifted in promoting the literary, musical, dramatic and social efforts of the student body. Mr. Benn, as Honorary President of the Literary Society, supervises the activities of that body with unusual success, and each year develops and conducts an orchestra of which a school such as the C.S.A. may well be proud. Mr. Hillerud is an able assistant in literary and musical work, and other staff members co-operate in assisting all student organizations and in making student life outside of the classroom attractive and interesting.

The policy of holding the Literary Society programmes on Saturday evenings and of following the programmes with a short dance has proved an unqualified success. The students enter into the preparation of programmes with enthusiasm; only occasionally is it found necessary for staff members to contribute numbers.

CULTURAL EDUCATION AND OTHER SPECIAL SUBJECTS OF INSTRUCTION.

Following the conference of the staffs of the schools of agriculture at Osds in October, where the necessity of instruction in cultural subjects was more or less emphasized, the programme at Claresholm was so arranged that some attention might be given to this phase of student education.

One period per week with each class of girls was set aside for instruction in music, not with the intention of giving music lessons, but rather to develop an appreciation of good music, and an understanding of the principles underlying musical harmony. This work was undertaken by Mr. Hillerud, and the success attained in the short space of two months warrants its continuance through the term.

One period was also scheduled with the first year boys and girls for diplomatic discussion and instruction in matters of everyday etiquette; for assisting backward students with their individual difficulties in their studies; for suggesting best methods of study, of preparing for examinations, and of writing examinations; and to help students in many ways so that they might get the most out of the school course. This period is proving to be one of the most valuable on the programme, and already is adopted as a permanent fixture.

The necessity for more attention to instruction in physical culture at this school, where a gymnasium is not available for general

athletics during the winter, has always been recognized. The activities of the Athletic Association only partially meet this need. Many students take little active part in the regular programme of games, and these can be reached only through compulsory periods in physical training. For the first few weeks of the 1929 fall term a fifteen minute P.T. period for all men students was arranged before the commencement of morning classes. After Field Day this period was sandwiched in between the afternoon laboratory periods. Attendance of all students at this P.T. period is insisted upon. We propose to continue this training throughout the entire term, as it seems to be meeting a real need in the daily routine of student life.

HOME ECONOMICS.

After the close of the school term in the spring the Home Economics teachers were engaged in various kinds of extension work until required for the school fair circuit in September. During April they assisted in the sending out of the school fair seeds. For the greater part of the summer Miss MacIntyre conducted short courses for the Women's Home Bureau Service through the central districts of the Province. Miss Pokotilo assisted with school fair organization, and gave a number of special demonstrations in home decoration and sewing at several points.

The equipment of the home nursing department has been made complete in every detail, and the room originally used as a dining room for meal serving competitions has been converted into a class room for nursing instruction, and reading room for the home economics classes. The small room off the kitchen, originally used as a pantry, is now fitted up as a small dining room. This arrangement is found to be very convenient, and the instruction in nursing and meal serving is now carried out with more efficiency.

FIELD HUSBANDRY.

Climatic Conditions.—Taken as a whole, the climatic conditions of 1929 were very unfavorable from the point of view of crop production. January was generally cold with almost continuous snowstorms and flurries. February was somewhat warmer, with many days of thawing weather, nevertheless a good covering of snow was maintained over the fields. In March warm days and high winds removed the protective snow, and considerable soil drifting occurred. April was wet and cold, very little growth taking place. May was very similar to April, and there was no favorable growing weather until after the middle of the month. The bulk of the precipitation for April and May was in the form of snow which soaked into the ground as it melted, building up a large reserve of soil moisture which later proved invaluable. The last killing frost was on the morning of May 15th. The growth of the cultivated plants actually started on May 19th, though many hardy weeds were well advanced at the time. June was warm with prevailing fine weather. There were heavy rainstorms for the first four days. The last effective precipitation of the season was on June 17th. July and August were hot and dry, though we had a

few local showers, which presumably saved the crops. Excellent conditions for harvest and threshing prevailed throughout the autumn. We had exceptionally heavy precipitation in November and December. We have grounds for a very optimistic outlook for 1930, for although the soil was completely desiccated at the end of the crop year, the late fall precipitation must have built up some reserve, and we enter 1930 with a good covering of snow. Besides, it was not lack of precipitation, but an unfortunate distribution which somewhat reduced our 1929 yields.

The School Plot Experiments.—The testing of grain and forage crops was continued as in the past. Nine varieties of spring wheat were tested in triplicate 0.01 acre plots. Eight varieties were tested in quadruplicate rod-row plots. Seven varieties of oats were tested in triplicate 0.01 acre plots, and ten in quadruplicate rod-rows. Nine varieties of barley were tested in triplicate 0.01 acre plots and eight in quadruplicate rod-rows. There were also tested 5 varieties of millet, 5 varieties of flax, 12 varieties of corn, and 13 varieties of potatoes.

In winter wheats we continued our work on rates and dates of seeding, the co-operative study of winter hardiness, and tested 24 varieties in quadruplicate rod-row plots. Experiments with super-phosphate were continued this year with wheat and oats on both summerfallow and spring ploughing. Very encouraging results were obtained. Fourteen rotation experiments were carried on in addition to experiments on cultural practices pertaining to wheat and sweet clover. Work with forage crops was continued as in the past.

A new investigation on cultural practices concerning alfalfa was started during the summer. A considerable area of the experimental grounds was found to be so depleted of organic matter that it was deemed advisable to plant it to sweet clover.

The extension work of the department is steadily increasing, and it is felt that real service is being rendered in this connection.

HORTICULTURE.

Efforts were made to re-establish and re-condition the orchard and small-fruit plantations, which have been neglected for some years. The dry season made this work difficult, but considerable success was achieved. New plantings of strawberries and gooseberries were established. New fruit trees planted included Hibernal apples, Transcendent crabapples, Whitney crabapples, bush cherries, and Chinese cherries. Two grape vines were planted, but it is doubtful whether or not they successfully struck root.

The trees of Columbia Valley and Robin apples produced a good crop of nice fruit, as also did the Dakota and Dalga crabs, Compass cherries, and wild plums. Both the Dakota and Dalga crabs made excellent jelly and preserves.

A good crop of vegetables was grown, and a great profusion of flowers maintained on the school grounds throughout the summer. A feature of the year's work was an exhibit that was sent to the

Calgary horticultural show. This consisted of fruits, vegetables and flowers. It was adjudged the finest exhibit at the show.

THE SCHOOL FARM.

The past year has proven a successful one from the standpoint of the school farm. Crop yields were high, despite the dry summer. Thirty acres of fall wheat yielded 42.5 bushels per acre, grading No. 2 A.R.W. Seventy-five acres of oats averaged 67 bushels per acre, and 35 acres of barley yielded 45 bushels per acre.

The first cutting of alfalfa gave a yield of 50 tons from 31 acres, the quality being better than the average. The extreme drought experienced throughout the late summer, however, proved disastrous to the second crop, which was too short to warrant cutting.

Fifteen acres of sweet clover was grown for ensilage, and this filled the two silos—total capacity 165 tons—and supplied a surplus of 3 tons of sheaves.

Pasture held out very well, no shortage being experienced until late September, when it became necessary to feed the milch cows a small daily ration of ensilage.

The swine breeding herd was renewed during 1929. Five young Yorkshire sows of our own breeding were kept for brood sows, and a young boar was purchased from the Dominion Experimental Farm, Lethbridge. In addition to these, one Berkshire sow is kept for cross-breeding purposes.

Eight litters were farrowed during the year, averaging 8 pigs per litter.

A flock of 18 Shropshire ewes dropped 27 lambs, 19 of which were raised. Four of the best ram lambs were sent to the Lethbridge sheep sale early in October, and won third and fourth in their class. They sold at an average price of \$26.50 each.

The dairy herd at the close of the year consisted of 22 pure-bred Ayrshire females, and two herd bulls; 1929 was a banner year for the dairy herd. For the first time a show herd was sent out on the western circuit, showing at Calgary and Edmonton.

The ten animals that made up this herd brought home a total of twenty-nine ribbons and two grand championships from these two shows.

The herd consisted of the following animals. A few of the winnings are also indicated.

1. Two-year-old bull, home bred. Alberta Bred Champion at Calgary.
2. Senior yearling bull, imported. Junior Champion, Calgary. Grand Champion, Edmonton.
3. Two mature cows, Alberta bred. Fourth in Alberta Bred, Calgary; fourth and fifth Alberta Bred, Edmonton.
4. Two two-year-old heifers, imported. 2nd and 3rd Calgary. Grand Champion, Edmonton.
5. Senior yearling, home bred. 4th in open class, Calgary.
6. Junior yearling heifer, home bred. 1st in Alberta Bred and 1st in open, Calgary.

7. Two senior calves, home bred. 3rd and 4th, Calgary. 4th and 5th, Edmonton.

3rd in herd, Calgary.

4th in get-of-sire, Calgary.

3rd in Alberta Bred Herd, Calgary.

It was felt that the success attained in the west warranted sending some of the best stock to the Toronto Royal, and accordingly three head were entered.

The imported bull, South Craig Prince John, won his class at Toronto, and a two-year-old heifer in milk won 8th place in a strong class.

A herd of beef cattle—6 Herefords and 8 Aberdeen-Angus—were maintained for classroom work. An Aberdeen Angus calf from this herd was sent to Olds in December, 1928, and was shown from there at the Royal in 1929, winning 3rd place.

The entire flock of poultry had to be cleaned out in 1928, owing to T.B. infection. A small flock of Leghorns was raised in 1929, but owing to lack of housing and equipment little can be done in the matter of flock improvement.

SWINE CLUBS.

Two swine clubs were under the supervision of the School of Agriculture during 1929, one at Claresholm and one at High River. Each of these clubs sent a team to the Provincial swine judging contest held in Edmonton. High River won second place, and Claresholm 11th out of 27 teams.

The new policy of the Alberta clubs holding a fall sale instead of shipping the market pigs, is looked upon with considerable favor. It will furnish a means of keeping desirable young breeding gilts in the district. This change of policy is expected to assist materially in maintaining interest in the clubs during 1930.

SCHOOL FAIRS.

The spring organization period was reduced to a considerable extent, owing to adverse weather conditions, and the late arrival of seed supplies. Some confusion and inconvenience to those in charge of school fair work resulted, but notwithstanding this four new fair centres were organized. One of the former fair centres failed to organize. The work of visiting the schools during the months of May and June was carried on as in former seasons. As a consequence of an increasing number of fairs, the work of visiting schools is becoming more difficult to complete in a satisfactory manner. In this connection plans are under way for a change of policy that will probably result in this work being done more thoroughly and a greater spreading of agricultural knowledge among the children of rural schools.

The school fairs were held during September and October under most favorable weather conditions. Exhibits in all classes were of a very high standard. The grain and vegetable classes in a great many centres were not well filled owing to the exceptionally dry growing season. A notable feature of the fairs was the gratifying

increase in the number of inter-school competitions in singing, public speaking and physical training, many fairs being compelled to hold additional sessions in order to complete these competitions.

The experiment with the so-named "two day" fair proved very successful, and a great many centres are planning on adopting this policy in 1930. It must be understood that a two day fair does not necessitate the loss of two school days, because the exhibits are merely set up and judged on the first day, the children attending on the second day.

Plans were formulated this year for the increasing of the time given to demonstrations and instructions by the judges at the fairs. These departures were followed with keen interest by the boys and girls, and even more so by the adults and parents. It is planned, therefore, to increase this feature of the judging in the future.

There has been a fairly general demand for a school fair convention to be held in June or July, 1930, and as a result plans are under way to make this possible.

SCHOOL FAIR SHORT COURSE.

The annual short course week for boys and girls obtaining the highest total of points at the 1928 school fairs, from points within the Claresholm circuit, was held July 13th to 20th. Forty-one boys and girls were in attendance. The programme of classes, games and entertainment was similar to that of former short courses. Dormitory and boarding accommodation were arranged in the main building as usual. Weather conditions were very favorable, and the boys and girls enjoyed a splendid week of work and play. At the close of this course, the Department Scholarships of one term of the regular course at the Agricultural School were awarded to Alberta North, Strathmore, and Arthur Patterson, Midnapore.

C.S.A. ALUMNI ASSOCIATION.

Owing to the great amount of illness amongst our students during the winter term, the usual winter meeting of the Alumni Association was cancelled. For the first time in the history of the association a two-day reunion was successfully carried through on July 25th and 26th. Nearly two hundred ex-students were in attendance during the two days. The newly-elected President for the association's year, from July, 1929, to July, 1930, was Mr. Nelson Fraser, High River, a graduate of Class 1918.

REPORT OF THE SCHOOL OF AGRICULTURE, OLDS.

(F. S. GRISDALE, *Principal*)

STAFF.

The members of the teaching staff at the Olds School of Agriculture and the subjects they teach are as follows: F. S. Grisdale, B.S.A., Principal and Agronomy; G. R. Holeton, B.Sc., Mechanics; A. T. Kemp, B.S.A., Botany and Horticulture; E. W. Phillips, B.S.A., Animal Husbandry and Farm Management; Fred F. Parkinson, B.Sc., Engineering and Electricity; C. E. Yauch, B.S.A., Science; W. W. Rogers, B.Sc., Mathematics and Economics; Miss A. Scott, Sewing; Miss M. C. King, B.Sc., Cooking; Miss M. H. Cox, B.H.Ec., Cooking and Household Administration; Mrs. E. M. Finlayson, B.Sc., Matron and Dietitian; Miss N. Rowell, R.N., Nursing; W. S. Morrison, B.Sc., Botany, Practical Field Husbandry and Mathematics; J. L. Williams, B.A., English and History; M. W. Malyon, B.S.A., English, Mathematics, Dairying and Poultry; C. H. H. Sweetapple, V.S., Veterinary Science; F. H. Budgeon, Practical Mechanics; S. R. Espedal, Instructor in Athletics.

ENROLMENT.

The enrolment of the Olds School of Agriculture this year is 227. This is a slight decrease from the enrolment of last year, but is the third largest in the history of the school. There are 110 first year students, 36 third year students and 81 in the second years.

The average annual attendance at the O.S.A. during the 16 years it has operated is 170. The average attendance for the past four years has been 238.

Our students, as in previous years, average about 19 years of age, but among them we have a considerable number ranging in age from 21 to 30. Thus we feel that the instruction offered is being appreciated, not only by the younger boys and girls of the rural districts, but by those of wider experience and more mature years.

PRIZES AND SCHOLARSHIPS.

The prizes and scholarships at the O.S.A. for the past year were liberal, and we are grateful to the friends of the school who contribute them, since they create an additional incentive for work.

HOME ECONOMICS.

The Home Economics branch of our work has progressed during the past year. The subjects taught in this course are practically the same as in the early years, except that during the past three years we have had a special one week's short course in millinery. This instruction has proven to be very popular.

AGRICULTURAL COURSE.

The course in agriculture has not varied a great deal during the past four or five years, apart from the fact that we have made provision for one more period per day for additional instruction in English and mathematics. In this way we feel that those students who have had very little grounding in the academic side of the work will be helped considerably from the standpoint of receiving a general education. Another change that we have made this year is that of providing a special instructor in farm machinery and engines. His services are added to strengthen the mechanics course and to render additional information in modern mechanics to students and farmers.

THIRD YEAR COURSE.

The third year matriculation course at Olds has now run for a period of five years. The enrolment in this class has been fairly uniform since the course was instituted. We have a membership of 36 in the class this year, as compared with 21 last year.

The original object of the third year course was to prepare those graduates who did not have their matriculation standing for entrance to the degree course in agriculture or home economics at the University of Alberta. We have found that although only a small percentage of these students have availed themselves of the opportunity of entering the University, they have all spoken very highly of the training received in the course, and with the thorough grounding that the third year offers many of our matriculation students have been able to secure good positions without taking further training.

It also provides a very valuable training for those who intend farming. We have observed, too, that the presence of a senior class of this kind has an influence, not only on the general discipline of the school, but also on the various students' organizations, and tends to promote a studious attitude among the younger members of the student body. On the whole, we feel confident that the third year work at Olds has proven to be very beneficial, and we believe that the demand for this advanced instruction will continue to grow as the years go on.

STUDENTS' COUNCIL.

The Students' Council is an organization consisting of members elected by the students from each of the various classes, with three additional members appointed by the Principal. The work of the council consists in the maintaining of discipline among the students and the general administration of their business affairs. The members of this organization work in co-operation with the Principal, and are largely responsible for the conduct of the students, both inside and outside of the school.

LITERARY SOCIETY.

The literary society is of value in the life of the students. It prepares the programs for the weekly entertainments, and is directly

responsible for the editing of the school paper, "The Chinook," which is read at these meetings. The programs prepared by the literary society consist for the most part of readings, debates, addresses and musical selections, in which the members of the student body take part.

ATHLETIC SOCIETY.

The athletic society directs the physical development of the students. Under its direction comes the school rink, and in the gymnasium it is responsible for the organization of indoor baseball, basketball, etc., in addition to the usual sports such as boxing and wrestling.

DORMITORIES.

The dormitories of the O.S.A. have now operated for three years with very considerable success in most respects. During the three years that they have been in operation we have had them filled to the doors, and have had an overflow of eighty men in addition who have had to find accommodation in private homes outside the school. This surplus from the dormitories we have been able to place, in the main, in fairly comfortable quarters, but the arrangement seems to make those who are outside feel dissatisfied and restless. It would seem that the solution for the overflow would be to use both wings of the present building for men students and to make provision for the women in some other structure that could accommodate them and the female help. With the average enrolment of men that we have had during the past four years the quarters of the two wings of the dormitory would have been a little better than filled had they been used for this service solely.

ASSEMBLY HALL.

The arrangement for gymnasium and assembly hall as now exists with one room serving both purposes, is anything but satisfactory. Such a scheme can be made to work for a time, but it very soon results in the destruction of the furniture used for the meetings, and a great deal of inconvenience to the gymnasium activities. The present room that is used for both purposes could, with a few alterations, be made into a suitable hall if another somewhat more spacious structure could be provided to handle the physical training work of the students.

INFIRMARY.

The lack of an infirmary is very badly felt at the O.S.A. Each year the school has had an outbreak of one or more of the contagious diseases, and with the existing facilities, without provision for proper isolation, it is impossible to control and check such epidemics, hence undue expense, loss of time and impaired health for the students result. What is more, the occurrence of such a nature, with the present inadequate control facilities, has a bad physiological effect on both the students and staff. The present condition could be remedied through the construction of a small addition to one of the present dormitory wings or by the erection of a small bungalow hospital separate from any of the present buildings.

O.S.A. EXTENSION LIBRARY ASSOCIATION, 1929.

The annual meeting of the O.S.A. Extension Library Association was held on January 2, 1929. R. E. Stewart was elected President, A. T. Kemp Vice-President, and C. E. Yauch Librarian and Secretary-Treasurer for the ensuing year.

Fifty-eight annual membership fees were received during the year. The Olds School Board pays an annual membership fee of \$3.00, which gives each pupil from Grades VII to XII the privilege of borrowing books.

During the year 328 books were accessioned. Ninety of these were received from the Overseas Victoria League. The library spent approximately \$235 on books. A number of the books were replacements and the majority were purchased with reinforced covers.

Nearly 500 posters, advertising the library, were sent out to the postmasters in the central part of the Province during the fall months. This no doubt helped to increase the membership slightly over last year. A book list of all the books accessioned since October, 1928, was published in October, 1929. This has been circulated freely, and is available to all members.

The total receipts for the year were \$441.14, the expenditures \$318.70, leaving a balance for 1930 of \$122.44.

The librarian was relieved, to some extent, of teaching during the fall term, with the result that a closer check was kept on the books, and his services were more available to students seeking information.

A circulation of approximately 2,000 books between the middle of September and the end of the year indicates that the library is used extensively by students, staff, local and rural members.

BOYS AND GIRLS' SWINE CLUBS.

The two swine clubs organized were reorganized this season. The Red Deer club this year had 15 active members, who fed 30 pigs. The Innisfail Club had a membership of 27, and fed 64 hogs, as several of the members fed three, and some four pigs each. The Innisfail club also fed five pure-bred gilts.

Difficulty was experienced in securing enough feeder pigs of the right type and quality to supply the demands of club members. It is expected that this difficulty will not be so evident this coming season, as the club members now own six pure-bred yearling sows and five gilts. They have also secured for use with these a good pure-bred boar loaned them by the Government. It is hoped that enough young stock can be raised from these sows to supply any club members who have not pigs of their own.

Judging demonstrations were put on at both points and a judging competition was held at each of the local swine club fairs.

This year the hogs, instead of being shipped to the central point as in other years, were assembled locally where they were graded by W. Wilson, of the Dominion Livestock Branch. Mr. Wilson gave much valuable information to the members on grading market

hogs. Many of the parents of the members, as well as a number of other visitors who are interested in club work, were also present at this demonstration.

The hogs were sold to one of the large packing companies at a price of 60c per cwt. under Calgary price, on local weight and grade.

A swine judging team and a demonstration team were trained at each of these points. These teams took part in the Provincial contests held in Edmonton at the end of the season.

Innisfail club won sixth place in the carlot competition and third place in the railway competition.

Red Deer won fifth place in the railway competition and seventh place in the judging contest.

Great interest was shown by the members in the work this season, in spite of the fact that there was quite a shortage of feed in some parts of the district included in the club. This feed shortage will, no doubt, interfere to some extent with the work during 1930, but steps have already been taken by quite a number of the members to ensure the necessary supply of feed for the coming season.

BOYS AND GIRLS' CALF CLUB.

A Dairy Calf Club was organized in the Olds district, supervised from the O.S.A.

Holstein heifer calves were secured for such members as had not calves of their own, and were fed and cared for by the members. These calves were shown at the Olds agricultural fair, and aroused more interest than any other class brought out. Sixteen members showed grade Holstein heifers and four showed pure-bred heifers.

The calves shown this year are being fed and cared for, and will be shown as yearlings in 1930 and as producing cows in 1931.

WEED CONVENTION.

The Field Crops Branch of the Department of Agriculture held a convention of weed inspectors and field supervisors at the O.S.A. in June. The convention was well attended, and the interest in the addresses and discussions was very keen. The staff of the O.S.A. assisted in the programme at this convention, and also with the one that was held at Drumheller.

SPECIAL CLASS OF OVERSEAS MEN.

In the months of April and May there were special classes of training put on at the school for two groups of old country men. Each group had a thirty day period of training. There were twenty-one in the first course and fifteen that attended the course in May. This summer course of training for the overseas trainees was the first we have tried. With the previous groups the training had been given for longer periods in the winter months when field work was out of consideration. The arrangement during the past

season, it would seem, is somewhat better than that used in previous years, and should have worked out well had it not been for the crop failure in many sections. When the men were through with their training course they were placed on farms that in most cases had been selected carefully. However, when the farmers found a light crop or crop failure facing them they had to let their help go, and it meant a great deal of changing for the men.

BRITISH GIRLS' CLASSES.

Two groups of British girls were given instruction at the Provincial School of Agriculture, Olds, during the months of June and July, 1929.

There were just four girls in the first group and five in the second. While quantity was missing, quality highly repaid the efforts of their instructors.

The aim of the course was to give the newcomer an insight into Canadian ways and methods. For this reason the most practical side of each subject dealt with was emphasized. The time of year was ideal for horticulture, and the girls took a keen interest in this outdoor topic. The Canadian cook-stove with all its drafts and dampers caused many a perplexing moment, but once the art of making a fire and regulating the stove was accomplished, they soon became very proficient in making bread, lemon pie, apple sauce, cottage cheese, etc. The treadle sewing machine also brought its difficulties. Practically all the girls had been accustomed to a hand machine, and it required perseverance and practice to become accustomed to the new method. The course included two problems in sewing, one piece of underwear and a tailored cotton dress, besides hemming towels and such problems as darning and repair work.

Other subjects dealt with were household administration, laundry, dairying, poultry. Even instructions in driving a Ford car were given.

When the girls of each group had completed their four weeks of training they were placed in farm homes which had been very carefully selected. Unfortunately poor crop conditions necessitated frequent changing, which was very trying for all concerned.

ALBERTA INSTITUTE OF CO-OPERATION.

The above institute held its annual gathering at the O.S.A. on June 25th to 28th, both days inclusive.

There were 461, all told, registered at the meeting, as follows: 87 junior members, 325 registered senior members, 49 guests.

The junior members were invited from the different U.F.A. Locals in the Province and the O.S.A. Alumni, and had all their expenses paid.

Addresses were given every day on farm and economic subjects by prominent speakers from Canada and other countries, from which a great deal of valuable information was derived. Amusements were provided for all in the way of athletic sports, baseball,

tennis, quoits and other games, in which old and young participated. A banquet was held in the O.S.A. dining room, June 27th, in which 320 sat down to table, which was presided over by the Premier of Alberta. A dance and supper was provided on the evening of the 28th, which was greatly appreciated by all.

The whole four days' meeting was splendidly conducted, and all arrangements carried out punctually on scheduled time. All members enjoyed themselves from beginning to end, and expressed their appreciation very fervently.

EXPERIMENTAL UNION.

The Experimental Union functioned very effectively again during the past year. The officers of the association for this year are: President, H. Phillips, Langdon; Vice-President, T. Kilduff, University, Edmonton; Secretary, F. S. Grisdale, Olds; Directors, P. Rock, Morrin, and R. Newcombe, Pollockville. The organization sent out a large number of samples of seeds and plants to parts in central Alberta, and have requests for a good many again this year. The seed fair held January 3, 1930, brought out a very good exhibit. There were sixty-nine entries, and the quality of the greater part of these was very superior. The exhibits with the exception of five were from ex-students.

VISITORS.

The number of visitors, both individual and in groups, was very heavy again this year. These visitors came in June and July chiefly, but some considerable numbers came during every month of the year. The people who make these visits come with picnics from U.F.A.'s, agricultural societies, women's institutes, church organizations and other societies as well as in small social community groups. The majority of those who visit the place are interested in all phases of the work carried on at the place, but the intense interest undoubtedly centres on the home beautifying phases of the place.

THE ALUMNI.

The Alumni Association had a successful year again in 1929. The number of paid-up memberships was considerably lower than in the previous two years, but on the whole the association is in good shape financially and in the matter of interest among the members. The meetings at the time of the summer and winter reunions, while not of record proportions, were well attended, and the executive received good support from the members. The following is the slate of officers for the current year: President, Tom Sigurdson, Red Deer; First Vice-President, Harold Phillips, Langdon; Second Vice-President, Mrs. Len Cooper, Olds; Directors, Mrs. Ray Woods, Carstairs; Miss M. English, Royal Alexandra Hospital, Edmonton; Tom Kilduff, University, Edmonton, and Alex. Buckley, Gleichen.

SCHOOL FAIRS.

During the season of 1929 forty-two school fair centres were arranged for, and of this number all but three held successful fairs. Four new centres, viz., Morrin, Caroline, Gwynne and Bashaw were organized, and two others, Millet and Leduc, were revived after a lapse of a number of years. Two fairs, Fleet and Keoma-Kathryn, failed to reorganize.

Owing to drought conditions in most parts the exhibits of vegetables and flowers were less numerous and of a poorer quality than usual. Surprising as it may seem, the quantity and quality of grain exhibits were better than in any previous year. The exhibits in other classes were quite up to the average.

Special features such as parades, singing and physical drill competitions and oratorical contests are becoming more common at the various fairs, these features adding spice to the day's programme. At a few centres evening programmes are arranged for these special features. This is splendid work which should be encouraged.

During the spring months the schools of fourteen centres were visited by either Mr. Swift or Mr. Holeton. The centres visited were Gwynne, Millet, Leduc, Bashaw, Clive, Caroline, Morrin, Leslieville, Eckville, Raven, Mayton, Lacombe, Red Deer and Sundre. These visits to schools and calls on fair officials have a very decided effect in stimulating interest in the work of the fairs as well as in forming a closer relationship between the Schools of Agriculture and the various communities. When convenient, calls are made on ex-students of the schools.

SCHOLARSHIP SHORT COURSE.

Each year a short course is held at the School of Agriculture for the boy and girl securing the highest number of points at each of the school fairs. The course is an educational and recreational nature, and serves to give these young people an insight into what the Agricultural Schools have to offer in the way of preparation for life work on the farm. Judging from the enthusiasm shown by the young people and the keenness of competition for these prizes, the work is well worth while, and justifies the expenditure made by the Government to carry on these courses.

The short course was held this year during the week of July 3rd to 9th with a total attendance of 94, there being 47 boys and 47 girls. Of this number 38 boys and 38 girls were from fair centres conducted by the Olds School of Agriculture, and 9 boys and 9 girls from fair centres on the Sedgewick line conducted by H. Scott, agricultural representative.

At each short course the boy and girl showing the highest general proficiency are awarded a free course at the Agricultural School on arriving at the required age.

These scholarships were won by Miss Irene Thomas, of Scollard, and Mr. Harold Westrom, of Veteran. Should either of these winners find it impossible to take advantage of the scholarship within a reasonable time, the scholarship will go to the next highest.

THE SEASON AND CROP OF 1929.

The weather during the past growing season was anything but favorable. The season was late in opening up, seeding got under way shortly after the middle of April, but was not general until the end of the month. Growth was slow in starting, and owing to continuous dry weather very few crops in the districts reached normal proportions at any time during the season. Some of the crops on breaking produced good yields, but those on summerfallow gave very disappointing returns, while the fall and spring plowing gave below average returns. The school farm crops were the lightest since 1922, returning yields of 23 bushels of wheat per acre on timothy sod breaking of 1928; of 50 bushels of oats per acre, part on fallow and the balance on fall and spring plowed stubble; and 26 bushels of barley per acre on sweet clover sod. The timothy and sweet clover mixed hay gave a yield of a ton and a quarter per acre. The silage crop of corn, sunflowers and green oats was lighter than usual, supplying only enough material to fill one silo. The potato crop was the lightest recorded in the history of the farm, the yield and quality being both away below average. The crops of roots and vegetables were very fair. The quality of all of the grain crops harvested on the school farm and on the farms in the district was especially high.

LIVESTOCK.

There are on the farm at the present time twenty-six head of horses. Twelve of this number could be classed as work horses, nine are colts, two two-year-olds, four yearlings, and three sucking colts, one aged stallion (*Job*), a saddle pony and six Percheron brood mares. Owing to the severe winter and heavy snow, all of these horses are being wintered in the corrals and stables, and are consuming expensive hay and oats in large quantities.

The cattle on the farm are confined to two breeds, Shorthorns and Guernseys. There are nine good mature females, two bulls and two calves in the Guernsey herd. In the Shorthorn herd there are twenty-two head of females of breeding age, two mature bulls and ten calves. In addition, there are eight feeder calves and eight grade cows.

There are eight superior breeding sows and two boars on the farm. Three of the sows are Tamworth; all the other swine are Yorkshires. There are forty feeder pigs in addition to these, most of which are nearly ready for market.

There are twenty-nine head of very excellent Shropshire breeding ewes, a ram and seventeen ewe lambs on the farm.

HORTICULTURE.

The 1929 season, through lack of moisture during spring and summer, was not satisfactory for the growth of most vegetables. Such crops as cabbage, swedes, etc., which grow late in the fall reached a good size, were tender and succulent, due to later rains. Potatoes, on the other hand, produced a very small crop, and in

some instances the ordinary crop produced another set of tubers, thus producing two crops of small inferior potatoes in one season.

The ornamental part of the grounds was not so good as usual till late August when stocks, asters and late sweet peas came into bloom. The grounds around the dormitory were planted to shrubs, trees and flowering plants, and while a fair amount of growth was obtained, lack of moisture prevented what might be termed a good display.

In the fruit orchard a number of good apples and crabs were produced. A little over one hundred pounds of crab apples were gathered; a few apples and one Opata plum tree bore fruit for the first time. Among the varieties of crabs growing successfully are: Dolga, Olga, Robin, Columbia, Hibernal, Silvia, Piotosh, Nocalza, Alexis and Transcendant. Most of the foregoing were carefully preserved in the usual manner of crabs. Some of them were very good; equal, if not superior in some instances, to purchased crab apples. Sand cherries gave a good yield, some were much sweeter than others; one in particular would appear to be worth while propagating, as it produces fruit that is of good size, sweet, without a large pit, early in maturing and a good yielder.

An interesting experiment was carried out to determine the often advocated merits of mulch paper versus no mulch. The advocates of this practice state it produces earlier crops, retains moisture in soil and does away with necessary cultivation. Results given below are for one year only, but nevertheless are interesting:

RESULTS: MULCH AND OTHER PAPERS VERSUS NONE.

Yields are in pounds for one rod row.

Treatment.	Tomatoes.	Corn (cobs).
No paper (land cultivated)	1lb. 14oz.	1lb. 9oz.
Mulch paper	5lb. 2oz.	4lb. 2oz.
Ordinary Tar Paper	6lb.	4lb. 1oz.
Ordinary Building Paper	4lb. 11oz.	1lb. 6oz.

The building paper was only good for one season, tarpaper probably for two, while mulch paper will do for three or four seasons.

The construction of a small hotbed greenhouse afforded a great deal of interest to visitors, and proved a great asset in raising plants. Besides starting early bedding plants, a crop of radishes and lettuce were produced early in the season. They were followed by tomatoes and cucumbers. Eight cucumber plants gave a yield of one cucumber per day from early July till end of October. The same number of tomatoes gave a basket of fruit each week from second week of August till the end of October.

Two exhibits were staged during the year, one at the Calgary horticultural show, the other at the O.S.A. during school fair.

REPORT OF THE SCHOOL OF AGRICULTURE, RAYMOND

(O. S. LONGMAN, *Principal*)

The staff members now engaged at this school are as follows: O. S. Longman, B.S.A., Instructor in Co-operation and Farm Management; D. L. Gilbert, B.S.A., Instructor in English, Mathematics and Horticulture; C. O. Asplund, B.S.A., Instructor in Animal Husbandry; W. G. Smith, B.Sc., Instructor in Field Husbandry; Kenneth Walker, B.Sc., Instructor in Science; C. W. J. Haworth, V.S., Instructor in Veterinary Science; S. C. Acheson, B.S.A., Instructor in Farm Mechanics; C. H. Giffin, Instructor in Irrigation; A. N. McDonald, Instructor in Dairying; W. Burnett, Instructor in Carpentry; Miss Emma E. Peterson, Instructress in Home Economics; Miss Jessie Redig, B.H.Ec., Instructress in Home Economics; Mrs. H. L. Nye, Instructress in Millinery; Miss Ruth K. Hulett, R.N., Instructress in Home Nursing.

Mr. Kenneth Walker, Mr. S. C. Acheson, and Miss Emma Peterson were appointed to take the positions previously occupied by Mr. T. C. McBeath, M. E. A. Barager and Miss A. P. Scott, respectively.

The total enrolment for the 1929-30 term was 95, composed of the following classes:

First year girls	24
Second year girls	12
First year boys	43
Second year boys	16
	—
	95

The above enrolment represents an increase of approximately fifty per cent. over that of the 1928-29 term. The increase is no doubt due in a large measure to the satisfactory crop returns received by the farmers throughout the district served by the school. In addition, the harvest for the past season was completed early, which permitted prospective students enrolling at the beginning of the term. The school staff was seriously depleted in numbers during the summer months, and very little personal solicitation of students could be undertaken. Most of the soliciting was done through Alumni members, posters, press articles and advertising.

The enrolment, as a whole, represents a very satisfactory percentage of the rural population served by the schools.

The 1928-29 term concluded on the 28th of March, when students were awarded diplomas in practical agricultural and practical home economics.

EXTENSION WORK.

The extension work conducted by members of the school staff included the supervision of school fairs and swine clubs and the conducting of co-operative experiments with commercial fertilizer and chemical weed killers.

Fertilizer Experiments.—These tests were conducted in co-operation with Consolidated Mining and Smelting Co. of Trail, B.C. A series of tests was outlined for both sugar beets and grain. Unfortunately the excessive rainfall in the spring interfered with the grain fertilizer programme, and only a few satisfactory tests were established. With sugar beets some three hundred tests were established in the spring; of these 250 were carried through to completion. The tests included the application of various fertilizers at different rates per acre and in various combinations. The fertilizers used included superphosphate, ammonium phosphate, ammonium sulphate and potassium sulphate. The results obtained with superphosphate and ammonium phosphate on both sugar beets and grain were most encouraging, and a keen interest was displayed by the various co-operators.

AGRONOMY.

The work of the agronomist during the summer of 1929 consisted of growing classroom material, supervising fertilizer experiments with sugar beets, and conducting experiments with chemicals for the destruction of weeds.

The last-mentioned project occupied the major portion of the summer's activities, and was conducted under the direction of the Field Crops Commissioner of the Alberta Department of Agriculture. The primary object of the work was to test the effectiveness of the commercial herbicides which are on sale in the Province. In addition to the commercial preparations, five pure chemicals were also tested. The weeds receiving the most attention were perennial sow thistle and Canada thistle, but some work was done with couch grass, stinkweed, ball mustard and dandelions.

About 900 plots were laid out and treated at Raymond, Edmonton and intermediate points, the object being to test out the different chemicals under a variety of conditions of soil moisture, soil type, atmospheric humidity, and stages of growth of the weeds. It is not possible at the present time to draw any definite conclusions regarding any particular chemical. Final results will not be known until next summer, when further observations will be made. The reason for the delayed report on the results obtained is that the perennial weeds, such as Canada thistle and perennial sow thistle, were treated at the blossom period of growth, which is considered by various investigators to be the least resistant to the action of chemicals. Following the blossom period an untreated weed normally matures, or is affected by frost or drought to such an extent that its appearance may be easily confused with the appearance produced by treatment with a chemical. Again, live roots in the soil may be inhibited from growth by drought or low temperatures, which would give an erroneous impression of the effectiveness of the chemical. It is for these reasons that final results must await the resumption of growth next spring.

SWINE CLUBS.

Swine clubs were organized at Hillspring and Glenwoodville. Tamworth feeders were used in both clubs. Owing to the fact that

we were unable to secure a sufficient number of good Tamworth breeding gilts, some Yorkshires were used. It is interesting to note that practically all of the female pigs, including those brought in for feeding, were kept for breeding purposes, with the result that there were approximately fifty high-grade sows left in the district. These should prove invaluable in raising the quality of the pigs in the districts concerned.

The clubs received instructions in swine judging during the summer, and a team from each club was sent to the central competition at Edmonton.

Following is a statistical summary of the club activities:

HILLSPRING:

Membership	32
Number of hogs	96
Number of feeder hogs shown at local club fair	62
Approximate number of hogs reserved for breeding purposes.....	64
Number of each grade shown: Selects 10, Bacons 25, Butchers 20, Light 6.	
Number of club members entering in Judging Competition.....	28
Standing in Provincial Railway Competition	5th
Carload placing	5th

GLENWOODVILLE:

Membership	13
Number of hogs	39
Number of feeder hogs shown at local fair	26
Approximate number of hogs reserved for breeding purposes.....	26
Number of club members entering in Judging Competition	12
Carload placing	13th

The Hillspring club had the largest number of pigs shown at any local club fair in the Province. The Glenwood club showed 100% of its pigs at the local club fair, which also constitutes a record.

SCHOOL FAIR SHORT COURSE.

The short course for school fair winners was held at the Raymond school from July 8th to July 13th inclusive. Twenty-four pupils took advantage of the course, including twelve boys and twelve girls. The course was an unqualified success and has given the school considerable publicity. Mary Hominuke, of Coal-dale, Alberta, and Albert Hartley, of Stirling, Alberta, were the scholarship winners.

HORTICULTURE.

The horticulture work at the Raymond school during the 1929 season was very satisfactory. The perennial flowers are now making a nice showing, the peonies especially doing remarkably well (the school now has a hundred named varieties). The gladioli and dahlias were well in bloom by the fifteenth of July, and the showing made by our flowers attracted hundreds of visitors.

The fruit trees yielded very well, the Waneta, Sapa and Opata plums bore heavily. We can especially recommend the Waneta plum for Southern Alberta. Of the smaller fruits, the bush types yielded only fair, while strawberries gave a very large crop.

The main garden demonstrated what may be accomplished in producing garden products under irrigation. Pumpkins, cucumber, squash and tomatoes gave splendid returns.

In the fall of the year a sweet pea experiment was started. The purpose of this experiment is to determine the possibility of sweet pea seed production in this district.

SCHOOL FAIRS.

School fair programme was continued as a part of the extension work of the Raymond School of Agriculture, as in past years. The fairs numbered fifteen in all, an increase of two over the previous year.

As a result of the sickness of the members of the school fair visiting team, only forty-one schools were visited in the spring. The schools visited were the ones that needed help most.

SCHOOL FARM.

Experimental Work.

Two feeding experiments were carried out during the summer.

1. *Creep Feeding Lambs on Sweet Clover Pasture.*—Two groups of Oxford sheep consisting of seven ewes and ten lambs each were placed on sweet clover pasture. In the case of one group the lambs were creep fed whole oats. This test brought out very forcibly that creep feeding lambs materially increases their gains and also reduces the amount of pasture required. The test also illustrated that continuous pasturing of sweet clover considerably reduces the carrying capacity of that crop and that the most economical method of handling is to have two or more fields so that stock may be changed occasionally.

2. *Feeding Potassium Iodide to Hogs which are being finished.*—This trial included two groups each consisting of ten Tamworth weaner hogs. One group received salt at the rate of one per cent. of the grain allowance, the salt having previously been treated with potassium iodide at the rate of three ounces to one hundred pounds salt. The other group received no potassium iodide. Gains in these groups were identical, indicating that this amount of potassium iodide did not influence the rate of growth.

Crops.

We were able to plow and work down most of the land during the autumn of 1928, which gave us a good start in the spring. The beet land had been worked until quite late in the spring. The fall wheat came through the winter in perfect shape and early in the season showed prospects of being a wonderful crop. Rank straw, however, resulted in serious lodging, which greatly reduced the yield.

Sugar Beets.—Acreage, 28; yield, 8 tons per acre. The yield was better than the previous year. The stand was greatly injured early in the season by a torrential rain, which occurred on June 1st. Thinning was made late by continuous storms which held up the work. The beets were irrigated in August. Harvesting conditions were excellent.

Winter Wheat.—In spite of serious lodging this crop yielded about 35 bushels per acre. Another fifteen-acre field was summer-fallowed and seeded to winter wheat this fall. This method is assisting us in cleaning up fields which are seriously infested with perennial weeds.

Spring Sown Cereals.—A complete change of seed oats and barley was made. Registered seed was supplied to replace our own.

Barley, O.A.C. 21—Average yield 50 (on old beet land).
 Oats, Banner—Average yield 65 (spring plowing).
 Oats, Victory—Average yield 70 (summerfallow).

Alfalfa.—The first crop was stored in excellent shape and yielded two tons per acre. The second crop was seriously reduced because of drought. Sufficient water could not be obtained to water both the alfalfa and beets, so the former suffered greatly. The yield was only three-quarters of a ton.

Sweet Clover.—This crop continues in favor at this farm. A field of thirty acres pastured 25 cattle, 100 sheep and ten head of horses continuously for four months. In addition seven tons of good quality hay was taken from the field. We feel sure the carrying capacity could have been increased by irrigation and by having a two-field system, but even without water and with continuous pasturing the performance of this pasture is remarkable.

A field of six acres supplied enough material to fill a 100 ton silo. By careful tramping we were able to obtain an excellent quality of ensilage this year.

Preparation of Beet Land for 1930.—Thirty acres of sweet clover stubble were plowed and worked down for sugar beets in 1930.

LIVESTOCK.

Holstein Cattle.—The herd consists at present of 10 cows, 13 heifers and a senior and junior herd sire. During the year a considerable amount of culling of aged and undesirable individuals has taken place.

Beef Cattle.—Twenty head of Hereford calves were purchased from the McIntyre Ranching Co. this fall. These are on feeding trials at the present time.

Horses.—A number of the aged horses have been disposed of. At the present time we have seven pure-bred Percherons, six pure-bred Clydesdales and four grades.

Sheep.—The flock now includes 70 mature Oxford ewes, 30 ewe lambs, 2 lamb rams and 2 flock sires. An excellent new sire was purchased this fall. The wool clip this year was good, averaging over 11 pounds to the fleece. The year's increase was 135%. Twenty of the lamb rams were contracted for in the spring at \$25.00 a head. One ram lamb was ordered by a breeder in B.C. and brought \$35.00. The gross income this year from the flock approximated \$1,300.00.

Swine.—Six brood sows are being kept at the present time. These are pure-bred Tamworth. Two litters a year are raised. There has been considerable demand for breeding stock especially young boars and bred gilts, a number of which have been sold in the district. A swine grader has recently been appointed at Lethbridge. Previously our market hogs have not been graded because they have been consigned to the Southern Alberta Co-operative Association at Lethbridge. It is worthy of note that the first shipment of hogs marketed and graded went 100% selects.

Poultry.—We have been carrying on private trap nesting for the purpose of selecting hens for breeding purposes. Twenty pullets were trapped for a year beginning December 14th, 1928. These pullets had been laying regularly since October 1st, and for this reason had nearly ceased laying by the following November. Only one hen produced into December. In spite of this fact the following satisfactory records were produced:

Hen No.	Eggs.
8.....	268
64.....	250
94.....	224
39.....	216
41.....	199
9.....	179 (unusually large eggs)

The work is being continued with an excellent pen of pullets. Our flock production average has been excellent during the cold weather, an average of 60% being maintained.

REPORT OF THE SCHOOL OF AGRICULTURE, VERMILION.

(W. J. ELLIOTT, *Principal*)

GENERAL CROP CONDITIONS.

Taken as a whole, the crops in the districts from Lavoy to the Saskatchewan border and along the C.N.R. were very disappointing this year. With slightly over 9 inches of moisture during the year, and only 5.25 inches during the crop months of May, June, July and August (or at the rate of 1.31 per month), we see at once what adverse moisture conditions prevailed for the growing crop. Last year 10.25 inches of rain, or nearly double, fell during the same four months. This shortage of moisture, coupled with the fact that we had only 1.07 inches of moisture last fall and little snow in the winter, could not result in anything else than a disaster to the crop in this region. All grain crops were extremely short and thin, so that great difficulty was experienced in cutting with the ordinary binder. The Government did good work in preparing an attachment for the ordinary binder, so that the short grain might be harvested. This attachment was shown at work on the Demonstration Farm at Vermilion. We do not know that the idea was adopted to any great extent, but we do feel that it helped farmers the better to think out other schemes that were applicable to their particular conditions.

AGRICULTURAL SCHOOL ATTENDANCE.

After a break of some years the School of Agriculture at Vermilion opened for Canadian boys and girls on October 25th, 1925. It was difficult to work up the first class, but since then there has been a gradual increase in attendance year by year. The past summer with its adverse crop conditions indicated that the attendance might be light. Contrary to expectations, however, we have registered as many students as during the banner year of 1927-28. We note, however, that during adverse years the proportion of girl students usually falls off as compared with that of boys. The attendance in 1929 was 176.

THIRD YEAR COURSE.

During the fall of 1928 the Government decided to introduce a third year similar to that included in the course at Olds. It will be noted from the above table that 11 boys and 1 girl started this course. Two dropped out on account of sickness. One boy was called home at Christmas and a fourth dropped out late in the course. Seven in all wrote on the May examination—four boys and three girls. All of the boys and 1 girl, or 71%, were successful.

Had it not been for the poor crops all who tried would have gone on to the University had they been successful. As it was, 2 boys entered the agricultural course of the University, and one of the girls is in the University Hospital, training for a nurse.

THE NEW DORMITORY.

The new dormitory is again proving its worth, in providing, in addition to rooming facilities, opportunity for athletics, literary efforts and a social life for the student body. With the students on the campus, the literary meetings are more regularly attended, and are becoming of real value in training the student body generally for that form of endeavor. For social functions the facilities cannot be surpassed, and one has only to visit the gymnasium to see the very great use the students make of the equipment there. The dormitory is again filled to capacity. This includes the top floor of the boys' wing, which has been divided into bedrooms, and in addition to this there are 19 beds on the top floor of the original school building. The girls' wing is not quite as full as last year, but we believe if the crop had been normal it would likely have been necessary to finish their fourth floor as well. The increasing attendance is the response on the part of rural people, when they know that facilities are provided for the proper care of the students, many of whom are away from home for the first time.

MEDICAL ATTENTION FOR STUDENTS.

The school collects a medical fee from each student at the beginning of the term. This is to cover a physical examination and doctor's attention during the term, and as well provides the supervision of a nurse for minor sicknesses. It, however, does not cover major operations, epidemics or major sicknesses.

Last winter this school, in common with many other districts, had a measles epidemic. It is unfortunate that this year mumps seem to have been brought in by a pupil from the Peace River. Before we realized it a number were afflicted with this trouble, and in all we have had nineteen cases. None of these presented serious difficulties, although a number of the boys and girls were very sick with high temperatures.

EXPERIMENTAL PLOTS.

Under the direction of Whitbread, the following varieties of grain and forage crops were tested:

Wheat	18	varieties
Oats	13	"
Barley	13	"
Flax	5	"
Field Peas	9	"
Spring Rye	1	"
Legumes	10	"
Millet	6	"
Turnips	7	"

PERENNIAL GRASSES.

These were sown in four rows to each plot. The 1927 seeding did not reach height sufficient to cut. Of the 1928 seeding only Western Rye and Meadow Fescue were cut, the Western Rye producing .8 ton and the Meadow Fescue .4 ton. All other grasses sown in 1928 were too short to be representative of a hay crop.

Corn.—Like the root crops, the corn varieties were a complete failure due to wind and drifting soil.

Hemp.—This was a particularly poor year for hemp. During the season it reached an average height of 16 inches, and was very scattered and utterly unfit for harvesting.

Sorghums.—Like the corn, these were so badly damaged that they had to be abandoned so far as reliable results were concerned.

Mangels, Sugar Beets, Fall Turnips.—These roots were a complete failure owing to the drought and the damage they received as seedlings from wind and drifting sand. Being intertilled crops there was, of necessity, a relatively large area of bare land exposed to the wind, which was exceedingly high this year.

Root Rot in Wheat.—This work takes the form of rotations which are seeded in quadruplicate and cover some 155 plots 1/100th acre in area. Twenty different rotations in all.

Stripped Rust.—Some 16 varieties of wheat were seeded in duplicate by hand, in rows 1 foot apart and 25 links in length. These were very carefully staked, and the experiment was conducted as directed.

Calcium Phosphate Test.—This work consisted of rotations and different rates of phosphate application. The rotations were conducted in triplicate and the rate of application in duplicate. Since wet late seasons are the chief reason for conducting the above experiments in the Province, this year's results were not of any great value. There was no difference in yield of treated and untreated plots, nor did the different rates of application show results. The average yield per acre of the respective crops was: Wheat, 10 bus. per acre; Oats, 22 bus. per acre; Barley, 17 bus. per acre; Flax, 6 bus. per acre.

Phosphate Extension Work.—This consisted of the supervision of the crops on seven farms, fairly widely scattered, which had been treated with an application of the phosphate fertilizer. The area in each case was five acres.

Potatoes.—Approximately four acres were planted to potatoes. About 350 bushels were produced, which was about three-quarters of what will be required in the dormitory. Due to the dry season the crop was exceedingly light.

Carrots and Parsnips.—These suffered so severely from drought that there were only a few sacks produced in each case.

Cabbage and Turnips.—A considerable area of cabbage was set out with a view to meeting the needs of the dormitory, but due to drought they were very small, and we only got a few that were at all suitable. The same thing was true of the turnips. All of our vegetables this year have been planted on thoroughly prepared

fallow land which had been liberally manured and which was in excellent shape. The drought, however, was very disastrous to all vegetables.

Fruit Area.—The fruit area was not extended this year, although land had been set aside for an enlargement of this work during the coming spring. The ground cherries and currants were the best yielders this season. The raspberries produced practically nothing at all. There were a few quarts of plums on the Native and Hybrid varieties. No apples of any kind have yet made their appearance. There was considerable winter killing of wood on the fruit trees, but generally speaking the orchard is doing fairly well.

Trees and Windbreak.—Another windbreak was planted consisting of four rows, two of poplar and two of evergreens. These were transplanted from the school lawn and were fairly large for transplanting, although with considerable care this was accomplished with scarcely any loss. In addition to preparing land for fruit trees, the north side of the experimental plot area along the fence has been summerfallowed with a view to setting out two rows of trees in the spring.

British Boys.—Up to the present time the following British boys have come forward through Hon. Herbert Greenfield, Alberta's representative in London. These are given by years:

British Boys—1924, 64; 1925, 23; 1926, 7; 1927, 18; 1928, 35; 1929, 13; total, 160.

The 1924 group was placed by the principal of the school, but groups subsequent to this and including the 1928 group were placed by the Dominion Government, Immigration Department, with, of course, assistance from the school.

Of the 1924 to and including the 1927 group, we can say but little now as they have quite largely passed beyond our knowledge. The 1928 group was about an average one, but the year was a very trying one as far as farm positions were concerned. They were all placed by the Dominion Government with our help, but as soon as seeding was over and the drought set in, many of these boys lost their positions. It was trying in the extreme to induce farmers to keep them on, or if they were out of a position induce farmers to give them work.

As the summer drought continued many of these boys wrote to us for new positions, but as the Vermilion district was perhaps as hard hit as any in the drought area, there was no possibility of positions here. All these requests were sent on to the Dominion Immigration Department, who were definitely looking after the placing of British boys. This winter we have 13 British boys attending the school. Nine of these are scholarship boys from the British Empire Association, three came on from Olds, and one had come out to Canada in May through Mr. Greenfield's office and had secured very little work on farms between that and November 28th when he came to us.

SCHOLARSHIP STUDENTS.

Three scholarship students are attending V.S.A. this year. Kathleen Mainwaring, St. Paul, who was school fair short course winner during the summer of 1927; Oscar Simpson, Sedgewick, won the similar scholarship for boys during 1926, while Percy Howe, Rivercourse, comes to us as a scholarship winner from the U.F.A. Farm Young People's Week, held last summer at the University.

TOBACCO REPORT.

The following varieties were tried: Connecticut Havana, Belge, Standup Burley. The tobacco was planted in 3-foot rows, 18 inches apart, from hot-bed the first week in June. It failed to reach a height that warranted any data being taken. There was a very stunted growth, due evidently to lack of sufficient moisture and no centre stalks developed. The highest plant was 7 inches, and due to the severe drought 50% of the plants shrivelled up by the end of August.

LEGUME CULTURE.

The preparation of "Legume Culture" was continued last spring as usual. Slightly over 3,600 bottles of culture were distributed. This was an increase of 28% over the 1928 sales, and equals the sales of the best season since the beginning of this service.

In distributing a considerable quantity of the culture we had the co-operation of the principals of the Olds and Claresholm Schools of Agriculture, and also the District Agriculturists of the Province. The sum of \$1,247.95 was remitted to the Provincial Treasurer during the season.

During the months of June and July a series of protein determinations were made on samples of wheat grown in the Vermilion district in 1928. During September and October we collected approximately 500 samples of wheat of the 1929 crop directly from the farmers, and thus obtained definite information on each sample. A considerable number of these men were very interested in the project, and asked that the results of the tests be sent to them when completed.

SWINE CLUBS.

During the past year we supervised Boys and Girls' Swine clubs at Vermilion and Mannville. Though the dry season created most discouraging feed conditions we were able to carry out the club programme in every detail. Instruction in feeding and in judging hogs was given to members throughout the season. Two car lots of hogs were shipped to the Swine Club Fair, and a demonstration and judging team represented each club in the various competitive events.

SCHOOL FAIR WORK.

A total of 36 school fairs was held, the Edgerton fair having been cancelled owing to drought conditions. The increasing new fairs for 1930 will be handicapped by existing conditions, and I would suggest that efforts be made to consolidate our present fairs

rather than inaugurate fairs at new centres. The school fairs in the Vermilion, Peace River and Edmonton areas were somewhat better than in former years, with the exception of four in the Edmonton district. This may be attributed to the fact that owing to the comparative lightness of the harvest more time was available to the older children to take part in the fairs. Livestock took a prominent place in the school fair activities, upwards of 12 dairy calves being shown at various points in a single class.

During the year a large number of our School Fair Associations agreed to pay \$5.00 towards the establishment of a second prize fund, to be given to the girl and boy standing second in the results of the annual short course.

A very successful short course was held in August, 1929, with an enrolment of 74 scholarship winners. At the close of the course examinations were set by the staff, and the winners of the Department of Agriculture Scholarship were Miss Katie Laskiwiski, of Fedorah, and James Williams, of Fort Saskatchewan district. Those standing second were Miss Ellen Walker, of Waskatenau, and Erwin Peavey, of Lea Park Fair. None of these children have as yet reached the age when they might take advantage of their assistance, but will be full term students of the Vermilion School of Agriculture in due course—the winners being given a full year and the second, in each case, being awarded an amount of \$50.00 towards the payment of expenses at the school.

THE PRESENT STAFF.

W. J. Elliott, B.S.A., Principal and Instructor in Civics and Farm Management; D. A. Andrew, B.S.A., Farm Manager and Instructor in Animal Husbandry; S. C. Heckbert, Instructor in Mechanics; J. E. Edgar, B.Sc., Instructor in Science; J. E. Horning, B.A., Instructor in English and Mathematics; B. J. Whitbread, B.S.A., Instructor in Agronomy; F. B. Dixon, B.A., Mathematics and in charge of Third Year Course; H. M. Baker, B.A., Assisting with Third Year Course, English, History, Composition, etc.; W. F. Raddatz, Assistant Instructor of Blacksmithing; E. W. Cormack, B.S.A., Instructor in Dairying and Drill work; Dr. Haworth, V.S., Instructor in Veterinary Science; Miss M. E. Storey, Matron and Dietitian; Miss M. P. Shaw, Instructress in Household Economics; Miss I. K. Riis, Instructress in Cooking; Miss L. M. I. Milne, Instructress in Cooking; Miss F. E. C. Reid, R.N., Nurse.

